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OF

MEDICINE AND SURGERY:

EDITED BY

LUNSFORD P. YANDELL, M. D.,

PROFESSOR OF PHYSIOLOGY AND PATHOLOGICAL ANATOMY IN THE UNIVERSITY OF LOUISVILLE,

AND

THEODORE S. BELL, M. D.

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THE

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OF

MEDICINE AND SURGERY.

JULY, 1853.

ART. I.—*On Dysentery.* An Inaugural Dissertation, submitted to the Trustees and Medical Faculty of the University of Louisville, February 1st, 1853, for the degree of Doctor of Medicine. By W. W. FRITTS, M. D., of Carlisle, Ky.

I propose giving a brief sketch of Dysentery, as it occurred in a portion of Nicholas county, Ky., in the latter part of the autumn of 1851.

The portion of country invaded by this disease, in an epidemic form, was so small, and its outlines so well defined, that I have thought it might not be out of place to describe very briefly the section thus visited, especially as it has heretofore been considered, if not the most healthy, amongst the healthiest portions of the county; and facts fully sustained this opinion until, in the year

1849, the cholera broke out in the lower part of this district, and in no other part of the county, proving fatal to quite a number of the inhabitants. The northeastern portion of the county is quite broken and pretty heavily timbered, except bordering on the water courses and valleys, which, in greater part, have been cleared out by the inhabitants, who dwell mostly in rude cabins situated on the low grounds. The soil, though not deep, is a rich black loam, resting upon clay, bedded at a depth of some six or eight feet, upon alternate layers of lime and soapstone, and is of that peculiar lively kind so well adapted to the growth of Indian corn and hemp; the former of which is the principal crop cultivated in this section. The water used for drinking and culinary purposes is limestone. The timber is white, red and black oak, poplar, ash, hickory and sugar-maple, with an under-growth of blackhaw, black-hickory, scrubby oak, &c., &c.

The water courses flowing in a north-easterly direction empty into the Licking river; they are small, but very numerous, passing over exceedingly rough limestone beds, having a fall of some seventy feet to the mile.

The dividing ridge separating these streams from those which flow in an almost opposite direction, emptying into the Slinkston fork of Licking and its tributaries, is the highest elevation of land on the line from Maysville to the city of Lexington, being five hundred and eleven feet above the Ohio at low water at the city of Maysville, and three hundred and eighty-four feet above the Licking at the same stage of water, which latter is but about five and a half miles from this summit. This north-eastern slope, extending from the highlands near Carlisle, the county seat of Nicholas, to Licking and some miles up and down said stream, is the district in which Dysentery appeared in an epidemic form. On one of the streams, I believe there was not a habitation where the disease did not prevail, and scarcely an individual who was not the subject of

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an attack of more or less violence. The disease, however, extended beyond this boundary, but its violence was always proportioned to the distance at which it occurred from the infected district, as was manifested by the fact that cases, as a general thing, y elded to, or reisisted remedies, just in proportion as they were removed from or near the centre of the infected region.

Having briefly described the district invaded by Dysentery, it remains for us to discover, if possible, a cause existing in the boundary specified to which we can plausibly attribute the prevalence of the epidemic; a cause existed most certainly—but what was that cause?

The following general and local facts are detailed because of the probable influence they had in the production of the disease under consideration.

The summer and autumn of 1851 were most remarkable for the extreme drought which prevailed throughout northern Kentucky. It was remarked by the oldest citizens, that a drought to the extent of the one which this season prevailed, had not occurred in the last fifty years. Streams and springs which had heretofore afforded an abundant supply of pure running water, were now dry, with the exception of here and there a stagnant pool.

The population in the locality of this epidemic live in small, badly constructed and poorly ventilated cabins, situated on the low grounds, near the water courses, but sometimes on the hill sides, and often partially buried in the ground, surrounded closely by the growing vegetation. The floors of their houses are composed of planks or slabs loosely laid on timbers very often completely buried in the earth, though frequently over a rude cellar of various dimensions, wherein is stored away cabbage, turnips, potatoes and other vegetables, for the convenience of obtaining them in the cold of winter. These reservoirs always contain a portion of vegetables left over the winter's use,

which here remain until the cellar is wanted the following season.

The loose condition of the floor offers a free passage for dish water and other slops, which are daily poured into this receptacle; and once a week, on washing day, the floor is flooded with soap-suds most profusely. Thus from the amount of water thrown into these cellars or pits beneath the floor, they become partially filled, and the unusual and protracted heat of this summer, acting upon the moisture and vegetable matters, rendered these sinks the hotbed of malaria and it is believed a fruitful source of disease. To this may be added the additional fact, that the numerous streams in this particular section of country, of ordinary seasons furnishing pure running water, were so dried up by the long continued and extreme heat of summer, that the accumulated filth and vegetable matters washed from the adjacent hills and usually covered by water, and consequently harmless, were exposed to the direct action of the sun's rays, thus furnishing all the essentials for the abundant generation of malaria.

Dysentery made its appearance in the lowest and dampest grounds, near the small streams, and was observed to prevail more extensively, and with greater severity, where we know the causes of malaria were abundant, and to which we are disposed to attribute, in great part its origin. Those persons who were fed best, clothed best, and who had the best water, and were most cle .nly as to person and habitation, were the ones who generally escaped the violent form of the disorder, although surrounded on all sides by it. When the disease occurred on the hills around, immediately in the vicinity of the most malignant cases, it was, as heretofore stated, much milder, and more easily managed.

The inhabitants are poor and are not always provided with a sufficiency of wholesome food, and as a consequence partake freely, at this season of the year, of green corn

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and other crude vegetables, to the exclusion of a more nutritious and healthy diet.

Are not the causes which we have thus briefly enumerated sufficient to justify us in the conclusion, that although this particular section of country is generally exempt from diseases of malarial origin, that this epidemic owed its existence, mainly, to this cause? To the above causes may we not add that of a general epidemic tendency, which doubtless existed throughout Northern Kentucky?

The initiatory symptoms of dysentery, as manifested in the epidemic of which I write, were by no means uniform. In some cases the first symptom was severe griping pains in the lower bowels, with an irresistible tenesmus, with very frequent but small discharges of mucus, slightly stained with blood. In this class of cases, fever was one of the first and most marked of the symptoms, with the usual train of phenomena accompanying it, headache, quick, tolerably hard, but small pulse, loss of appetite, thirst, skin not very hot, but dry and husky, tongue dry and covered with a short brownish fur, with red tip and edges, countenance expressive of intense anxiety, features sharp great tenderness extending over the region of the stomach as well as the entire abdomen. Cases thus violently ushered in, without premonitory symptoms, rapidly ran from bad to worse, every symptom becoming more severe, especially the tormina, which at times was almost insupportable; the desire to stool incessant, with inability to pass anything but the smallest quantity of mucus, and this attended with no relief. Very soon, if the disease was not arrested, the discharges, though not so frequent, became muco-purulent, the pulse very small, tongue glazed, sometimes cracked, the fever assumed a low typhoid character, with decided tendency to collapse—a feature noticeable in nearly all the more violent attacks, and always a most formidable symptom.

In another class of cases, the first symptom which at-

tracted the attention of the patient was pretty free discharges of blood with fæcal matter, accompanied to a considerable extent by griping pains in the lower bowels, at first not very severe, but if not speedily met by appropriate medication, hastily running into a serious form of the disease. The discharges, which at first were not very frequent, and which were followed by a temporary remission of the characteristic pain, became more frequent and the tormina and tenesmus more severe.

Fever, which had not previously been very prominent, now sets in with all the symptoms usually accompanying the febrile movement. The discharges, now more frequent, become quite small, consisting of blood and mucus with occasionally a little fæcal matter, with white shreds, seemingly of false membrane, and flakes of vitiated mucus and bran-like scales.

In the early stage of this form of attack, the pulse is generally full with some hardness, the tongue covered with a rather short, yellow fur, with redness of the tip and edges.

In quite a number of cases, the symptoms of an ordinary diarrhœa, continuing for a day or two, unattended by fever, but occasionally some griping pains in the bowels, were the first to attract attention. Such cases, if not promptly met, soon assumed the peculiar type of the epidemic, and when fairly developed were as troublesome to the physician, and as torturing to the patient as those more violent in the onset. Suppression of urine was a very constant symptom in this, as well as in most of the other forms of the disease.

Treatment.—In giving the treatment I shall confine myself to the principles and plan of treatment generally pursued in the epidemic which I have here attempted to sketch. Dysentery, being an inflammatory disease, requires depletion in proportion to the violence of the attack, the strength, habits and age of the patient, and the pre-

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vailing tendency at the time to assume a sthenic or asthenic character. During some seasons, and in some epidemics, the prevailing tendency is to sink rapidly into a typhoid state; at others, diseases of almost every kind run their course without this tendency to any marked extent—they are active—sthenic in character, and bear depletion well, in fact cannot be successsfully managed, in many instances, without its most active employment. At other times, diseases are ushered in bearing marks of being highly inflammatory—requiring apparently the most active treatment—but from the tendency to assume a typhoid character, we must be very cautious in the employment of depletory remedies, or before we are aware of it, our patient slips through our hands. Hence, from the decided adynamic tendency of this epidemic, one of the most important remedies in acute disease, viz.—general bleeding, was rendered unavailable, unless the patient was seen very early after the attack, and then only in a very limited number of cases was it deemed advisable to resort to it.

Another form of depletion and the one upon which we mainly depended, was in the use of laxatives, or rather gentle purgatives, from which we received decided benefit. When called to a patient, if general bleeding was not admissible, we usually gave small doses of calomel and ipecac combined with Dover's powder, every few hours, with a view of exciting the secretions. This was followed, in six or eight hours, by sulphate of magnesia or castor oil, with a few drops of laudanum to prevent griping. Having cleared the bowels of their vitiated secretions, and procured bilious evacuations, all forms of mercury were withdrawn and the bowels quieted by decided doses of Dover's powder and sulphate of morphia, repeated as indicated.

If there was much fever, as manifested by thirst, dryness of the skin, &c., ipecac was added to the anodyne. As an adjunct to the anodyne, in allaying pain, we have

found warm fomentations assiduously applied to the abdomen of the greatest benefit. As to laxatives in cases evidently typhoid in tendency, we prefer castor oil and spirits of turpentine combined, with the addition of the usual anodyne, to the sulphate of magnesia, as being better suited to the indications to be fulfilled.

When the disease is pretty strongly marked as inflammatory, we prefer the saline purgatives, as depleting more rapidly, and as has been said, relieving the local congestion directly. The sulphate of magnesia and castor oil may be rendered more bland and less irritating, and their efficiency not diminished, by the addition of a small portion of molasses or mucilage of gum arabic to each dose.

The warm bath we consider one of the most valuable remedies in the treatment of the disease, and when practicable we never fail to employ it, and with the best results. It relieves pain, allays thirst, and by cleansing and relaxing the skin, promotes perspiration.

A warm bath at bed time, with a Dover's powder and a cup of warm tea, seldom fails to produce diaphoresis.

Blisters were but little used, from the fact that we derived but little benefit from them, over and above that derived from sinapisms applied over the abdomen and stomach until the surface was almost vesicated, keeping up the effect of the mustard by the use of rubefacient applications, as aqua ammoniæ, spirits of turpentine, spirits of camphor, &c. From the proper use of the above, the sufferings of our patients were generally greatly abridged.

Emetics were not employed, for two reasons—first, because of the presence of gastric symptoms which we believed would not justify their use, and secondly, the most fatal form of the disease—viz: collapse—was preceded by active vomiting, accompanied by rapid diminution of temperature, which we never succeeded in restoring, though varied plans of treatment were adopted—all were alike unsuccessful. The collapse in this disease we con-

sider as more fatal, if possible, than that of cholera itself.

Injections were used, but no decided benefit seemed to follow their administration.

In our course of treatment we gave mercury occasionally, in small doses, combined with the anodyne, sufficient to keep up the biliary secretion, and no more. We moved the bowels once in the twenty-four hours, for the purpose of ridding them of the acrid secretions they contained, then procure quiet by the use of decided anodynes, as before.

Mercury was found not to be good treatment in the malignant form of the disorder.

Last summer and autumn, in the neighborhood of the famous Blue Lick Springs, dysentery prevailed to a very considerable extent, and was very successfully treated with Blue Lick water and Dover's powder alone. The disease did not occur in a malignant epidemic form, but cases of very considerable violence rapidly recovered under the use of the remedies above named.

These remedies were so successful in the past summer as to warrant their further employment. If opportunity should again present itself, I would feel myself justified in a further use of them.

ART. II.—*A Case of Nephritis, terminating in Abscess of the Kidney; matter discharged externally; recovery.* By L. P. Yandell, M. D., Professor of Physiology and Pathological Anatomy in the University of Louisville.

Mrs. S. J. —., aged 44 years, of good constitution, the mother of twelve children, was attacked on the 4th of September, 1851, with pain in the lumbar region, nausea, and other symptoms of calculus in the kidney. In previous years she had suffered much with similar symptoms, of which she was always relieved after the passage of urinary calculi. The first attack occurred in June, 1843,

when six months gone with her eleventh chi.., and from her sufferings she supposed she was about to miscarry, but the discharge of a calculus afforded relief in two or three hours. A week afterwards, another calculus, as large as a pea, was voided, the passage of which along the ureter excited great pain. When nursing her last child, three years subsequently, she suffered much with irritation of the kidneys, induced by the presence of calculi. These, on examination, were found to consist of lithic acid mingled with a large amount of mucus. A visit to Grayson Springs, in April, 1847, improved her health and she had no recurrence of the disorder until the spring of 1848, some months after she had ceased to nurse her child. The attacks in May of that year, while she was on a visit to New York, were frequent and severe, her general health suffering much from the continued renal irritation. On the first of the ensuing August, a calculus was discharged after several hours of intense pain, and from that time she remained free from her complaint up to the date of the last attack. This was preceded for several months by symptoms of gastric disorder; her appetite had been poor and her digestion bad. For several weeks after the first violent symptoms had passed away, she continued uncomfortable, with imperfect digestion, pain and irritation in the region of the left kidney, headache, slight fever, and disturbed sleep. By the use of opiates she finally seemed to obtain relief from these symptoms, and at the beginning of October was considered convalescent.

Oct. 14th. A pain was felt to day in the right side, in the region of the kidney, such as that with which she had suffered so severely in the left, and on the 18th she was seized with a severe, protracted chill. This was followed by others on succeeding days, two, three, and sometimes four occurring in the course of four and twenty hours. She lost flesh rapidly; her complexion, which had been

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good at the commencement of her illness, became sallow, her skin cool, and her muscular system flaccid. My friends, Profs. Miller and Gross, who had been requested to see my patient, advised the use of iron and bitter tonics. About this time a tumor was detected in her right side, which struck me at once as being connected with the right kidney. After a careful examination, Profs. Drake, Miller and Gross, and Dr. D. W. Yandell formed the same diagnosis of the case. The tumor, which was deep seated and fixed, appeared to be as large as a man's fist, firm, and not painful, except on pressure or the patient's attempting to lie on her left side. The tonic course was kept up for many weeks, but although aided by brandy and a generous diet she continued to lose flesh; the tumor increased slowly in size and was more painful when she lay on her left side; she had frequent, almost daily, chills, followed by fever; her urine was turbid with mucus, in which the microscope detected crystals of the triple phosphate. On the 23rd of December, a considerable quantity of pus was voided with the urine, and she seemed somewhat relieved by the discharge. Pus corpuscles were detected in the urine for several days. On the 30th of December she made the following memorandum respecting her case:

"To-day I have less acute pain in the upper part of the bladder or right ureter than I had yesterday, and less soreness of my side; yet, upon the whole, I have not felt so well. I am extremely weak; I do not feel that I am stronger than I was a month ago, though my appetite is better. I have a great sense of sinking when I first wake in the morning and until I take some nourishment. The urine, when first discharged, looks clear and natural, but on standing is found to contain a considerable quantity of mucus, with some pus and crystals of the triple phosphate, which under the microscope show beautifully. My bowels are in a perfectly healthy condition, and have been all

the time of my sickness, except when I have taken opium. I rest well at night, though my sleep is heavy and not as refreshing as when I was in health. I generally feel much better in the morning than at any other time. I take my breakfast in bed, which consists of milk with crackers, plain corn bread, or buckwheat cakes, and occasionally a little meat. As soon as I rise to dress, though I exert myself as little as possible, I begin to feel faint, with such a sense of sinking that I am often obliged to lie down. And now begins the feeling of general discomfort which clings to me through the day. I am not often in much pain, but in such a state that it requires the greatest effort of the will to change my position. During the morning I drink several glasses of ale. My dinner consists of one kind of meat, and one or two vegetables, with jelly and fruit. My appetite is wayward, and I soon become tired of the same article of diet. I often, during the day, obtain a comfortable position by elevating my feet, sometimes higher than my head. I lie most comfortably with my feet drawn up in bed; in fact I cannot lie with them extended long at a time. I am entirely unable to lie on my left side, owing to the pain it produces in the right kidney and throughout the abdomen. On retiring I generally find it necessary to have a warm iron applied to my feet, which are very cold at that time."

After the discovery of pus in her urine, we began to entertain hopes of her recovery, supposing that the abscess might discharge itself through the ureter and bladder. Her appearance improved, and shortly after she wrote in her diary—"I felt more comfortable throughout the day, and went to bed with more healthful feelings last night, than I have done since I became so ill."

Jan. 10th, she wrote: "Rather comfortable throughout the day; but I gain no strength, and my side is sore and painful."

18th. "The top of my hip, the hip joint and leg down

to the knee, were so painful last night that I had to take laudanum. A very sharp, sudden pain across the small of my back this morning. I am daily growing weaker; have less and less ability to move about; my lower extremities, back and loins seem to be somewhat paralysed."

On the 15th she rode out in a carriage, but fancied that the jolting motion increased the pain in the hip and side; the next day, however, she repeated it, and thought she was improved by the ride.

18th. She wrote: "Had a bad night until I took laudanum. My side and hip are excessively painful. I am beginning to feel apprehensive of an outward abscess, my side is so tender to the touch."

A few days later she made the following note of her case: 21st. "Rather an uncomfortable night; more unwell than I have been for weeks; severe pain in my side all day. About 4 o'clock I passed several small calculi, in all forming a mass as large as a pea, black when first voided, but gradually assuming a brown color."

From the extreme tenderness of the tumor and other indications present, it was plain that the abscess which had formed was pointing externally. A blister was applied over the most sensitive part, which drew well and afforded some relief; but in a few days her sufferings were again intense. She wrote on the 24th—

"A most restless and uncomfortable night; my side, and back, and hip could hardly be worse; had to take laudanum."

And again a few days after:

28th. "Had a wretched night; inhaled chloroform almost constantly; feverish, and drank a great deal of water; not a moment's rest all this day."

On consultation with my medical friends, it was decided to attempt to evacuate the contents of the tumor by an operation, and accordingly, on the 28th, Prof. Gross, in

presence of Prof. Miller, Dr. Clapp, and Dr. D. W. Yandell, introduced an exploring needle, preparatory to making a larger incision. We were much pained at seeing blood, instead of pus, escape, but it was concluded not to repeat the puncture at that time. Five days after the operation, she wrote:

Feb. 2nd. "My side was so painful that I had to take laudanum, and then a very large pill of opium, last night. I am too feeble to sit up; dull and uncomfortable all the time from taking opium, though it is the only thing that procures rest for me at night. Any change of posture for two days past has produced excruciating pain. Still my appetite is very good; my digestion excellent; and I am free from nausea."

The secretion of urine at this time was copious, owing in a great measure, no doubt, to the freedom with which she indulged in lemonade and effervescing drinks.

6th. Prof. Gross, at my request, punctured the tumor again to-day, and this time with success, more than a pint of pus being discharged, and with signal relief to the patient, who immediately afterwards was able to lie on her left side. A few days previous to the operation she was unable to lie on either side. She passed a very comfortable night, but next day, the discharge having ceased, her side became nearly as painful as ever. The day following the matter made its way spontaneously through the orifice, which had closed temporarily, and afforded perfect relief. She wrote on the 10th:

"Slept well without an opiate; drank but twice during the night; comfortable this morning; side discharging freely."

On the 15th she made the following memorandum;

"I can lie a little on my right side, the swelling and soreness have so diminished; can sit up a minute, and put my leg a little; my side continues to discharge freely."

On the 20th the abscess was not running, and the pa-

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tient was first chilly, and then feverish and uncomfortable. She soon became sensible of the dependence of her comfort upon the continuance of the discharge, and was in the habit, when it ceased, of removing the scab from the orifice, which generally renewed it.

25th. Had a slight chill, followed by a good deal of reaction; drank ice water and bathed her feet and hands, which afforded much relief. Abscess not discharging.

26th. Slept well; feels comfortable; fine appetite; sat up several minutes to have her hair dressed. Abscess discharging freely.

March 1st. Rested pretty well; side still runs; no chilliness; very well all day.

4th. Restless, bad night, after 1 o'clock; restless and uncomfortable to-day; soda water constantly. Abscess not discharging.

Thus the patient continued to alternate from day to day, as the matter accumulated or was discharged. On the 15th she wrote:

"Rested well last night, and feel well this morning; side discharging very little; soreness in it diminishing."

About this time she began to be troubled with pain after micturition, and other symptoms which suggested that a calculus had probably passed into the bladder. I sounded for one ten days after, but failed to discover it.

April 2nd. She wrote thus: "I think I shall not again entertain much hope of recovery. I may live a good while as I am, but every thing seems to indicate at present that this is a permanent abscess. It discharges almost constantly, but the discharge has ceased to afford the relief it did at first. I suffer now as much from fever and nausea when it is discharging, as I did for some time when it was not. I gain strength very slowly."

On the 11th—

"Rested well; night sweats for a week past; nausea all night. Ate some fat bacon at breakfast this

morning, for the first time in a fortnight, and relished it."

Two days after she wrote—

"Rested well, but feel sick this morning, and chilly; the abscess did not discharge yesterday; last night I had the scab removed from the orifice, but no matter has appeared yet. All my symptoms indicate a not very remote termination of my disease—pain in voiding urine, and constant inclination that way; severe occasional pain in the pelvis; nausea; night sweats."

15th. She was carried out of her room and sat up in an arm-chair two or three hours.

23rd. Rested well, and feels pretty well this morning; abscess discharging very little.

27th. After suffering a great deal for two or three days from the presence of a calculus in the bladder, she passed one to day, of a triangular form, as large as a filbert.

29th. Has rested comfortably since the passage of the calculus. Gains strength daily.

May 1st. Side not discharging; bad night; nausea. The same next day; some relief from the nausea by creosote, but still much indisposed; hip very sore.

6th. Rested well; feels better; abscess discharging freely.

9th. Rested well; and although side not discharging, feels quite comfortable.

From this time the abscess discharged very little, but the patient continued to improve daily. She began to move about the house with assistance, but for several months was unable to bear any weight on her right leg, which had become contracted at the knee. Gradually the soreness about the hip and the contraction of the leg wore away, and by the first of November she was able to walk without crutches. She gained flesh, strength, and spirits rapidly by a journey to the South, and now weighs more than she has done in ten years. She still occasionally passes calculous matter, and a month ago was affected

for a few hours with severe pain in the left ureter, from the presence of a calculus, but a little laudanum and sulphuric ether afforded her prompt relief.

I think there can be no doubt as to the pathology of this case, which, altogether, is a remarkable one. The disease was nephritis, occasioned by a calculus, resulting in abscess of the kidney. The matter burrowed considerably in its passage towards the surface, and was discharged at a point below the crest of the ilium. It was destitute of odor after the first discharge, and appeared to me well-conditioned. No urine or calculous matter ever escaped with it at any time. In the history of the case I have not entered into details of treatment, for the reason that little was attempted in that way, beyond palliating symptoms and supporting the strength of the patient. It was a case in which medicine, apart from this, promised but little.

Of the various outward directions that the pus in renal abscess may take, the one which it pursued in this case is the most common, according to writers on pathological anatomy. Craigie describes the process which takes place in such cases, as the following: "The concretion giving rise to ulceration, first of the kidney or its pelvis, or the top of the ureter, causes at the same time suppurative and adhesive inflammation, proceeding gradually to the surface, where it forms a prominent tumor, red, painful, soft, and fluctuating, and, either a spontaneous opening taking place or after an incision, matter is discharged, and not unusually with that one or more urinary calculi, or scabulous matter and urine. The swelling subsides after the first discharge of matter; but the aperture evinces no disposition to close, and matter continues to be discharged for months, or years, while a long sinus or fistula leading to the kidney is maintained. It is then a renal fistula, discharging matter, and sometimes urine and sand, or urinary concretions. If the opening happen to become closed, much pain is produced, and all the former symp-

toms of nephritis ensue, until fresh suppuration takes place, and the aperture is reopened.*

This is a very good description of the case the particulars of which have been related in the preceding pages. In most of these cases, Dr. Cragie remarks, "the local disorder of the kidney, if it do not prove immediately fatal, gives rise to more or less hectic fever, with wasting and loss of strength." The favorable issue of our case was due to the fortunate escape of the calculus, which, by its presence, had excited and kept up the renal irritation. The quantity of pus discharged by the aperture grew less and less every day after the passage of the calculus, until it ceased altogether, and the orifice was permanently closed. There is reason to believe that the secretion of the diseased kidney continued all the time, for the amount of urine voided was about as large as natural; and it is certain that this fluid did not constitute any part of the contents of the tumor, for the pus never emitted at any time an ammoniacal or urinous odor.

June 30th, 1853.

ART. III.—*Cold Water in the Reduction of Hernia* By R. R. GRESHAM, M. D., of Ebenezer, Miss.

The following case, in which cold water was successfully employed in the reduction of hernia, is deemed worthy of publication.

The case was one of oblique inguinal, or scrotal hernia, in a male servant. On the 5th of June, at 4 o'clock, P. M., the obstruction occurred. I was called to see him the next day about 5 o'clock, A M. When I arrived, I found the patient in the utmost pain and suffering. The hernial tumor was very large, and not disposed to yield to the

* Elements of General and Pathological Anatomy. By David Craigie, p. 941.

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usual remedies prescribed for the reduction of hernia. I gave him an anodyne, and left the following prescription:

℞ Wine Antimony
Tinct. Lobelia ää ℥ss.

M. Take 13 every half hour Apply cloths dipped in warm water every fifteen minutes; for the purpose of relaxing the muscular system. At 3 o'clock I saw the patient again, but found no amelioration of the symptoms; if anything, the sac was more tense, and the patient exhibited some incoherency of mind. I began to think I should have to operate, but concluded, before resorting to this last measure, to try the effect of an emetic and the application of cold water to the scrotum. The following prescription was given:

℞ Tart. emetic, gr. vi.
Tinct. Lobelia, ℥j.

M. Give ℥j. every fifteen minutes till free emesis occurs. This over, a gentle stream of cold water was let fall a distance of four or five feet on the tumor, while I administered, at intervals of half an hour, ℥ss of the mixture already mentioned. The tumor began to recede under this treatment, and in the course of an hour and a half from the time the operation was commenced, the tumor was small enough to be grasped in my hand, and by gentle taxis returned to its proper place.

June, 1853.

REVIEWS.

ART. IV.—*The Action of Medicines on the System; or, "on the mode in which therapeutic agents, introduced into the stomach, produce their peculiar effects on the animal economy."* Being the Prize Essay to which the Medical Society of London awarded the Fothergillian gold medal for 1852. By FREDERICK WILLIAM HEADLAND, B. A., M. R. S., etc. Philadelphia: Lindsay & Blakiston, 1853.

The work before us is a decided proof of the revolutionary character of medical science. But a few years ago, many of the high authorities in medical teaching considered that Humoralism, in which they included almost every conceivable form of error in medicine, was forever down; that there was not a remote chance even for one of its multitudinous forms of error to spring into being again, and that the breaking up of that empire of night had paved the way for a glorious state of things in medicine, which might almost be regarded as a millenium. As a converse to all this, it was strongly urged that solidism was but a synonyme for truth; that it contained all vital truth in medicine; that its inculcations had cleared the triumphant progress of medical science from a host of errors that had pinned it to the earth through epochs of time, and that henceforth the "true sun of medical science was high in the ascendant." When Andral began his labors, he was long looked upon with dubiety, and his greatest truths were received with strong suspicions. He

was labeled a humoralist, and was shunned as though he were a bale of goods that had been put up in some district of Egypt afflicted with the Oriental Plague, from which noxious pestilence might be caught. But times have changed; humoralism has slowly, but triumphantly worked its success, and its truths are now admitted in almost every quarter. The exclusiveness of solidism died hard, but it died quite effectually.

The author of the work before us is a strong advocate of the humoral school, and his work is a welcome addition to the literature of therapeutics. His introductory remarks are of an excellent character, and they fully reveal the comprehensive manner in which he has studied his subject.

The second chapter is devoted to "some of the more important classifications of medicines, and opinions of authors respecting their action"

Chapter third is "on the general modes of action of therapeutic agents introduced into the stomach; treated of in ten propositions," which we quote, in order to give some idea of the character of the book.

Prop. 1. That the great majority of medicines must obtain entry into the blood or internal fluids of the body, before their action can be manifested

Prop. 2. That the great majority of medicines are capable of solution in the gastric or intestinal secretions, and pass without material change, by a process of absorption, through the coats of the stomach and intestines, to enter the capillaries of the Portal system of veins.

Prop. 3. That those medicines which are completely insoluble in water, and in the gastric and intestinal juices, cannot gain entrance into the circulation.

Prop. 4 That some remedial agents act locally on the mucous surface, either before absorption or without being absorbed at all That they are chiefly as follow:

a. Irritant Emetics.

b. Stomach Anæsthetics.

c. Irritant Cathartics.

Prop. 5. That medicine, when in the blood, must per-

meate the mass of the circulation, so far as may be required to reach the parts on which it tends to act.

That there are two possible exceptions to this rule :—

a. The production of sensation or pain at a distant point.

b. The production of muscular contraction at a distant point.

Prop. 6. That while in the blood the medicine may undergo changes, which in some cases may, in others may not, affect its influence. That these changes may be—

a. Of Combination.

b. Of Reconstruction.

c. Of Decomposition.

Prop. 7. That a first class of medicines, called Hæmatics, act while in the blood, which they influence. That their action is permanent.

1. That of these some called Restoratives, act by supplying, or causing to be supplied, a material wanting: and may remain in the blood.
2. That others, called Catalytics, act so as to counteract a morbid material or process ; and must pass out of the body.

Prop. 8 That a second class of medicines, called Neurotics, act by passing from the blood to the nerves or nerve-centres, which they influence. That they are transitory in action.

1. That of these some, called Stimulants, act so as to exalt nervous force, in general or in particular.
2. That others, called Narcotics, act so as first to exalt nervous force, and then to depress it; and have also a special influence on the intellectual part of the brain.
3. That others again, called Sedatives, act so as to depress nervous force, in general or in particular

Prop. 9. That a third class of medicines, called Astringents, act by passing from the blood to muscular fibre, which they excite to contraction.

Prop. 10. That a fourth class of medicines, called Eliminatives, act by passing out the blood through the glands, which they excite to the performance of their functions.

The ten propositions are handled with a high degree of skill, and very fully vindicate the soundness of the judg-

ment of the London Medical Society in presenting this work to the study of the profession. The following is he "classification of medicines which act after entering the blood, according to their supposed modes of operation," adopted by the author:—

CLASS I. HÆMATICA—

Div. 1. *Restaurantia*—Ordo 1. Alimenta. Ordo 2. Acida. Ordo 3. Alkalia. Ordo 4. Tonica. Ordo 5 Chalybeata. Ordo 6 Solventia.

Div. 2. *Catalytica*—Ordo 1. Antiphlogistica. Ordo 2. Antisyphilitica. Ordo 3. Antiscrofulosa. Ordo 4. Antiarthritica Ordo 5 Antiscorbutica. Ordo 6. Antiperiodica. Ordo 7. Anticonvulsiva. Ordo 8. Antisquamosa.

CLASS II. NEUROTICA—

Div. 1. *Stimulantia*—Ordo 1. Stimulantia Generalia. Ordo 2. Stimulantia Specifica.

Div 2. *Narcotica*—Ordo 1. Inebriantia. Ordo 2. Somnifera. Ordo 3 Deliriantia.

Div. 3. *Sedantia*—Ordo 1. Sedantia Generalia. Ordo 2. Sedantia Specifica.

CLASS III. ASTRINGENTIA—

Ordo 1. Astringentia Mineralia. Ordo 2. Astringentia Vegetabilia

CLASS IV. ELIMINANTIA—

Ordo 1 Sialagoga. Ordo 2 Expectorantia. Ordo 3. Cathartica Ordo 4. Cholagoga. Ordo 5. Diaphoretica. Ordo 6. Diuretica.

The introductory remarks of the author contain a fair synopsis of the views of the work, on each of the ten propositions we have quoted, and in order to give our readers some insight into the character of Dr. Headland's labors, we quote this synopsis in full.

"Let us consider, as it were, the history of a remedy from the beginning to the end of its course. It is already "introduced into the stomach"—we must commence with it there. Now it does not remain there. It cannot act from the surface of the stomach through the medium of the nervous system.

In the *First Proposition* it is affirmed that it must obtain entry into the fluids of the body—pass, that is, from

the intestinal canal into the system at large—before its action can begin. There are four proofs of this. It is shown that when introduced at another part of the body a medicine acts in the same way as when placed in the stomach. It is found by direct experiment that a poison will not act through the medium of nerves only, but that its passage in the blood is required. Thirdly, the course of the circulation is quick enough for the most rapid poison or medicine to pass quite round the body from the veins of the stomach before it begins to operate. The last and most conclusive argument to show that medicines pass out of the stomach into the system, is that they have actually been detected by chemists, not only in the blood, but in the secretions formed from the blood. Remedies, then, pass from the stomach into the blood and fluids. How do they do so?

In the *Second Proposition* it is laid down that all those which are soluble in water, or in the secretions of the stomach or intestines, pass through the coats of these organs into the interior of the capillary veins which surround them. It has already been shown that most medicines pass through in some way; we shall now have to learn how they pass, and what special arrangements are made for the passage of substances differing in nature. By the physical process of absorption a liquid may pass through the animal membranes, from the interior of the stomach or intestine to the interior of the small vein which lies close outside it. In examining the laws by which this process is conducted, we shall find that all the requirements are present in these parts, provided only that the substance to be absorbed shall be first in some way dissolved, and reduced to the liquid state. In the stomach there is, in contact with the substance just introduced, a thin watery secretion containing acid and a matter called pepsin; this is the gastric juice. A large number of medicines are soluble in water. They are dissolved in this fluid. Some others are soluble in dilute acid. These too are dissolved here. Albumen, and matters like it, are reduced to solution by the aid of the pepsin, which is the principle of digestion. But there are some few mineral bodies, and many vegetable substances, as fats and resins, which cannot be thus dissolved by the juice of the stomach. They are soluble, more or

less, in a weak alkaline fluid; and such a fluid is the bile, which is poured out into the first portion of the intestine. They too are reduced to solution and absorbed. In this manner it is shown that a very great majority of remedial agents are capable of being reduced to solution, of being absorbed without material change, and of passing thus into the circulation.* Very few are quite insoluble; but some that are dissolved with difficulty may be left partly undissolved in the intestinal canal. What becomes of these?

It is asserted in the *Third Proposition* that substances which are thus insoluble cannot pass into the circulation. Arguing from a physical law, we should say at once that it was impossible; but the matter cannot be so lightly dismissed, for a foreign professor has lately asserted that insoluble matters may and do pass into the circulttion. I have made experiments to satisfy myself on the point, and have come to the contrary conclusion.

In the *Fourth Proposition* it is stated that some few substances may act locally, by irritation or otherwise, on the mucous surface of the stomach or intestines. These are not many; they act without being absorbed; and they do not extend into the system at large. In some few cases, these local actions may be succeeded by changes in distant parts, on the principle of *Revulsion*.

Having just shown how medicinal substances are absorbed, we have now to suppose that they are in the blood.

It is next maintained, in the *Fifth Proposition*, that the medicine, being in the blood, must permeate the mass of the circulation as far as to reach the part on which it tends to act. This it can easily do. The circulating blood will conduct it any where, in a very short time. Supposing a medicine has to act on the liver, or on the brain, or on the kidney, it does not influence these organs

* There is no doubt that the small veins which ramify outside the coats of the stomach and intestines are capable of taking up any matters in a state of proper solution, even fats when dissolved in alkali. But are medicines ever taken up by lacteal absorbents? Probably seldom or never; for it seems that these vessels are only engaged after a full meal, and subsequent to the regular formation of chyle. They do not exist in the coat of the stomach, but commence in the small intestine at some distance from the pylorus.

at a distance, but it passes directly to them in the blood, and then its operation is manifested. This may be called the rule of *local access*. Its proof depends on two things: on the impossibility of the medicinal influence reaching the part in any other way, as shown in the first proposition; and on the fact of medicinal agents having been actually detected in many cases in the very organs over which they exert a special influence. But are there any exceptions to this? Can a medicine ever produce an effect without actually reaching the part? It seems that there may be two exceptions. In some cases an impression of *pain* may be transmitted along a nerve from one part to another; and in some other few instances a muscle, when caused to contract by the influence of a medicine, may cause other muscles near it to contract by sympathy.

Before we inquire into the remedial action of the medicine in the blood, we must consider whether that fluid may not first alter it in some way, so as to hinder or affect its operation. To a certain extent this is possible.

In the *Sixth Proposition* it is asserted that while in the blood the medicine may undergo change, which change may or may not affect its influence. It will have to be shown that this change may be one of *combination*, as of an acid with an alkali; of *reconstruction*, when the elements of a body are arranged in a different way, without a material change in its medical properties, as when benzoic is changed into hippuric acid; or of *decomposition*, when a substance is altogether altered or destroyed, as when the vegetable acids are oxidized into carbonic acid.

Having considered these preliminary matters, we shall arrive at the main point. The medicines are now in the blood. We must consider what becomes of them; what they do next; where they go next; and how they operate in the cure of diseases. I have made a classification in which medicines are divided according to my views of their mode of operation. The classes and their subdivisions will serve for references in illustration of what I have to say. For it is not possible to speak of the general operation of medicines without adducing particular instances; nor will time and space always allow me, in doing so, to refer to individual medicines.

There are four great groups of medicines, the action of each of which is well marked and distinct. The first class acts in the blood; and as a large number of diseases depends on a fault in that fluid, we may by their means be enabled to remedy that fault. They are the most important of all medicines. They are called Hæmatics, or blood-medicines. They are used chiefly in chronic and constitutional disorders. But a second class of remedies are temporary in their action. They influence the nervous system, exciting it, depressing it, or otherwise altering its tone. They are chiefly useful in the temporary emergencies of acute disorders. They can seldom effect a permanent cure, unless when the contingency in which they are administered is also of a temporary nature. They are called Neurotics, or nerve-medicines. A third set of medicines, less extensive and less important than the others, acts upon muscular fibre, which is caused by them to contract. Involuntary muscular fibre exists in the coats of small bloodvessels, and in the ducts of glands. Thus Astringents, as these agents are called, are able, by contracting muscular fibre, and thus diminishing the calibre of these canals, to arrest hemorrhage in one case (when a small vessel is ruptured,) and to prevent the outpouring of a secretion in another case.

The fourth class is of considerable importance. Some medicines have the power of increasing the secretions which are formed from the blood by various glands at different parts of the body. By their aid we may be enabled to eliminate from the blood a morbid material through the glands; or we may do great good by restoring a secretion when unnaturally suppressed. They are called Eliminatives. Like Hæmatics, their influence is more or less permanent. That of Neurotics and Astringents, particularly the former, is transient.

The general mode of action of these four classes of therapeutic agents is laid down in the four remaining propositions, about as far as it seems to me to be capable of a positive definition. Each proposition concerns one of these classes of medicines. All I can do now is to recapitulate the chief affirmations made; as to give any idea of their proof would require me to enter into a number of details which had better be postponed to the third chapter.

In the *Seventh Proposition* it is stated of Hæmatic medicines that they act while in the blood, over which fluid they exert an influence; and that their effect, whatever it be, is of a more or less permanent character. A line of distinction is drawn between two divisions of this class of blood-medicines. Some of them are natural to the blood; they resemble or coincide with certain substances that exist in that fluid; so that, having entered it, they may remain there, and are not necessarily excreted again. These are useful when the blood is wanting in one or more of its natural constituents. This want causes a disease, and may be supplied by the medicine which in this way tends to cure the disease. Medicines of this division are called Restoritives; for they *restore* what is wanting.

Some other blood-medicines, although they enter the blood, are not natural constituents of the vital fluid, and cannot remain there, for they are noxious and foreign to it. They must sooner or later be excreted from it by the glands. They are of use when disease depends on the presence and working in the blood of some morbid material or agency, which material or action they tend to counteract or destroy. They may be called *vital antidotes*; not strictly *specifics*, for they are not always efficacious, on account of variations in the animal poisons, or from the casual operation of disturbing causes. They are applicable in those many dissorders which depend, not on the absence of a natural substance, but on the presence of an unnatural agent in the blood. These medicines are called Catalytics, from a Greek word which signifies *to break up* or *to destroy*. Having performed this, their function, they then pass out of the blood.

All this requires to be proved.

In the *Eigth Proposition* it is stated of Neurotics, or nerve-medicines, that they act by passing out of the blood to the nerves, which they influence. This is only to insist on the rule of *local access*, already laid down in Prop. V. It is further affirmed that they are transitory in action. They appear to affect molecular changes in nerve-fibre, similar to those by which the phenomena of the senses are produced, and which are by nature transitory in their results. And yet they may be very powerful, even so as to extinguish vital force. Thus, short and unenduring as is the operation of these agents, it may

last long enough to cause death, and so a temporary influence produce a permanent result. There are three divisions of Neurotics. The first set are of use when there is a dangerous deficiency of vital action. These are stimulants. They exalt nervous force, either of the whole nervous system, or only of a part of it. They vary very much in power. A second set, called Narcotics, first exalt nervous force, and then depress it. They have thus a double action; but they have also a peculiar influence over the functions of the brain, which is different from any possessed by other nerve medicines. They control the intellectual part of the brain, as distinguished from its organic function; the powers of *mind* more than those of *life*. Some Narcotics tend to produce inebriation; others, sleep; others, again, delirium. In the third place some Neurotics tend simply and primarily to depress nervous force. They may act on the whole nervous system, or on a part of it only. They are often very powerful; and they are of use when, from any cause, some part of the nervous system is over-excited. They are called Sedatives. Like other Neurotics, they are used in medicine as temporary agents in temporary emergencies. If a permanent action be required, the remedy must be constantly administered, so that the effect may be kept up by continual repetition.

In the *Ninth Proposition* it is affirmed of Astringent medicines that they act by passing out of the blood to muscular fibre, which by their contact they excite to contraction. They do not so much influence the voluntary fibre of the muscles, which is under the direct control of the nervous system; but they chiefly manifest their action on the involuntary or unstriped muscular fibre, which is not directly controlled by the brain and nerve-centres, and for this reason more under the operation of external or irritating agents. Meeting this in the coats of the capillary vessels and of the ducts of glands, they are enabled to act as styptics, and as checkers of secretion. The action of Astringents appears to depend on a chemical cause; for we find that all of them possess the power of coagulating albumen.

The *Tenth Proposition* treats of Eliminatives. It is not said simply that these increase the secretions of a gland; or that they stimulate the glands while passing

by them in the blood. But it is laid down as a rule that they act by themselves passing out of the blood through the glands, and that while so doing they excite them to the performance of their natural function. They are substances which are unnatural to the blood, and must therefore pass out of it. In so doing they tend to pass by some glands rather than by others: in these secretions they may be detected chemically; and it is on these glands they have an especial influence. Their uses in treatment are various and manifold."

ART. V.—*A Treatise on General Pathology.* By Dr. J. HENLE, Professor of Anatomy and Physiology, in Heidelberg. Translated from the German, by HENRY C. PRESTON, A. M., M. D. Philadelphia: Lindsay & Blackiston. 1853.

The science of General Pathology is so vast in its intimate relations with every department of medicine, is so essential to all true inference or reasoning upon diseased conditions of the animal economy, and is so necessary to the thorough equipment of the philosophical practitioner, that we hail with pleasure every new contribution to the stores of the science. The author of the book before us is a master spirit in general pathology, and he will command the respect and admiration of all who place themselves under his instruction. His work is not only instructive, but is entertaining, and cannot fail to interest, at least in its historical features.

Dr. Henlé commences his labors with a review of medical systems, in which he presents the claims of rational pathology in a striking light. His symptommatology and nosology, contained in the divisions of rational pathology cannot fail to command respect.

The history of medical systems is divided by Dr. Henlé into seven divisions, and we strongly urge these historic details upon the attention of the reader. We are

restricted, by want of space, to a single quotation, in this department of the work :

"The distinguishing character of Rokitansky's school consists in its scientific perception and application of these relations. Its reputation was still farther increased, when, by the quantitative chemical analyses of the blood, most thoroughly made by Denis and La Cann, it had become possible to ascertain the abnormality of the blood chemically. Rokitansky had, as it were, already prepared the departments under which this accession to the material was to be brought. Andral and Gavarret are indebted to him for the effect which their work upon the pathology of the blood excited in Germany, still more than in France.

But with all these enrichments of the science, the school remained an anatomical one, and did not get rid of those fundamental errors which had misled the solid pathological anatomists upon the barren heath of speculation. Nothing was changed, except that the unity of disease forsook its old quarters in the organs and tissues, and took up new ones in the blood. It was no more inflammation, but excess of fibrin; no more nervous fever, nor even gastro-enteritis, but albuminous crasis. There were no investigations made concerning the development of symptoms from the dyscrasy, nor of the development of dyscrasia from external causes; but, worse than this, flimsy dogmatical hypotheses were adduced concerning both. That in Vienna, under such circumstances, limited to the result of post-mortem examinations, the school could have remained at this stage of investigation, is conceivable. But it seems more strange that an Andral should have presumed to explain, with a similar alteration of the blood, so hetrogeneous and complicated diseases as typhus, small-pox, scarlatina, and many others.

Let us turn to England, where, as remarked above, since the time of Harvey all inquiries into organic nature were answered experimentally. John Hunter was the first who transferred this method to the proper department of pathology. His work upon the blood, inflammation, and gun-shot wounds reveals a series of genuine natural scientific investigations concerning one of the most important morbid processes. It includes the microscopic

observations of Leeuwenhoek concerning the circulation, and those of Hewson concerning the blood-corpuscles, and adds, moreover, the investigations of Hastings, Thompson, and others. In Germany, the school of Dollinger first investigated this fruitful subject, and notwithstanding it came to conclusions which are now proved for the most part erroneous, still at that time it had established its principles so securely, that we cannot again entirely lose sight of it.

Bell investigated pathology in another way. The physiology of the nerves advanced directly with the pathology of the nerves, after the idea had been conceived of creating artificial morbid condition, which might explain the importance of individual structures. From that time almost every new physiological fact served for the elucidation of pathological phenomena. The investigations of Flourens concerning the function of the individual parts of the brain, and Marshall Hall's theory of reflex action form epochs, the former as the foundation of a future rational pathology of the soul, the latter on account of its influence upon the doctrine of nervous sympathies.

Many similar acquisitions of modern times might be noticed, but we approach the present contents of our science, which it is the intention of this book to demonstrate. Duty will not allow me here to omit the name of one man, the physician who first in Germany, and with German fidelity, applied physiological experiments to the critical examination of general pathological opinions; I mean Stieglitz, whose pathological investigations (published in 1832) shall remain worthy of imitation on account of their method, when their substance shall have long grown obsolete.

One point more, I think, ought to be rendered conspicuous. I have shown how the pathologico-anatomical tendency was completed by means of a chemical element, and came partly in collision with it. Pathological physiology has already proceeded in the same way. If there, as it were a dumb chemical abnormality, was supposed instead of the morbific unity, so here, a fluid, chemical process is recognised as the cause of morbid symptoms. Organic chemistry has become physiological chemistry. The origin of this change lies in the discoveries of Mul

der, whereby the identity of the vegetable and animal sperm, and the common basis of all spermatic affinities, was proved. Thereby only was a theory of nutrition possible, which, on the one side, limited legitimately the faculty ascribed to the animal of forming the substances of its body; on the other side, investigated the means whereby metamorphoses of the material substances are accomplished. By the recognition of those most general fundamental principles, the physiology of the reciprocal change of matter has already gained a new and more positive form. Pathology also should promise itself abundant gain from a considerate application of those principles to the explanation of morbid processes.—Would that the fruits brought to maturity in sudden heat might not hasten to a speedy decay: and, above all, would that they might not be abused to decoy us back again into the old fetters. Already in the school of Liebig, which is as ignorant of modern improvements as of the earlier errors of our science, medicine is again metamorphosed into one of those crude humoral theories which, spreading like contagion, have hitherto followed after each chemical discovery. Not even the teleological vital force would be left to us; because Liebig understands, as well as his predecessors, how to draw out from the fine tissue of organic life a few threads, in the shape of chemical processes, and then to offer us the tangled skein as the share of vitalism. A host of weak eclectics praise him, that they are once more permitted to establish themselves in their inherited ideas, which they had feared they must abandon. In opposition to this reaction, which, like every reaction, obtrudes itself violently and vehemently, and in case of necessity renders contradicting facts suspicious, or silently suppresses them, physiology is obliged to take our threatened improvements under its protection. With the inborn legitimacy of facts, physiology shall encounter the conservatism which usurps opinion; but history shall teach us to mistrust every theory, which, without paying attention to the symptoms of diseases, has the impudent boldness to express their nature with one comprehensive word."

The department of General Pathology is divided into the following subjects: ***Definition and nature of disease***

—general etiology—disease in its relations of extent—the relations of disease with regard to time. These various themes are handled in the very spirit of a master of the whole subject, and we commend Dr. Henlé to our readers as one eminently entitled to their respect, and most careful study.

Art. VI.—*A Clinical Phrase Book;* in English and German, containing the usual questions and answers employed in examining and prescribing for patients; questions in asking for and buying medicines, etc. With an English-German and German-English Pronouncing Lexicon, of all the words occurring in the Phrases, with the chief technical terms of medical writers and apothecaries; grammatical appendix, table of idioms, &c., Designed to aid physicians and surgeons in Hospitals, Alms House and private practice; also druggists and pharmaceutists, in dispensing their prescriptions. By Montgomery Johns, M. D. Philadelphia: Lindsay & Blackiston. 1853.

We regard this as a most useful and valuable book for medical men. The increasing emigration of Germans to the western portions of the Union, makes such a work as the Clinical phrase book almost indispensable. Of this portion of the book the author says: "The questions are arranged in the order commonly followed in what is technically called *taking the case;* my model being that modification of Ricamier's plan given in Stilla's Elements of General Pathology, and being chiefly questions committed to paper by the bed-side from time to time as propounded. The answers, it is hoped, will be found to present that latitude which is generally noticed in similar replies; and both will suffice to elicit that sort of information relative to *subjective* symptoms necessary to correct diagnosis. * * * * The grammatical and lexicographical portions of the book were added to render the work complete in itself—for those

who wish to study the language; the beautiful copper-plate, of the German current hand, will be found useful both to the physician and apothecary as well as to all who wish to acquire the useful and elegant accomplishment of writing the German language in its own character. Of the utility of books of phrases, as aids in acquiring a knowledge of a foreign tongue, and especially for accelerating the progress of those whose aim is an early habit of speaking it fluently, there exists but one opinion, and that too decidedly favorable to need any apologetic comments here." * * *

"The increasing numbers of the German emigrant population, (only exceeded by the Irish) in our country generally, and in our Atlantic cities especially, where they remain for sometime after arriving among us, render their language an object of peculiar interest to all connected with the hospitals and eleemosynary institutions of the United States; the autumnal fevers, pneumonias, and catarrhs, the frequent cases of phthisis, and what may be called the febris advenarum, and typhoid fever, are all chiefly presented to the student of medicine, in the persons of German or Irish patients. To aid him and his professor, as well as the general practitioner, this little book is now offered to the profession.

"Two sections, on the examination of patients, either women or children, are added at the close of the Phrases, as they could not be incorporated into the body of the volume. It is hoped that nothing will here be found to offend the most sensitive delicacy, where the parties are necessarily woman and her physician. I have sought to bear in mind all along the caution of Cicero: 'retinenda est igitur hujus generis verecundia, præsertime natura ipsa magistra et duce.'"

"To Rab. Ab. Rice, by whom the phrases were first translated, to Mr. Julius E. Müller, of St Thomas College, Leipsic, who kindly revised the whole, to Mr.

Charles Sander of the University of Halle, who aided in drawing up the Lexicons, to my brothers, who have kindly shared with me every portion of the work, and the labor of reading the proofs, I am deeply indebted."

We cheerfully bear testimony to the fidelity of the work. We have given it a great deal of examination and study, and have found this little volume, which may be carried in the pocket, a highly useful and improving book. We have used a large portion of the general preface of the author, in our notice of the volume, because it sets forth clearly and accurately the merits of the work.

In the preface to the lexicons, the author says: "the reader will better understand the plan and scope of these two lexicons when he is informed what they do not contain. Within the brief space of 150 pages he will hardly expect to find all the words both of the English and German languages, though we promise him the *sources* of the immense vocabulary belonging to each. The dictionary in each part is PRONOUNCING, being based upon Ochlschläger's recent Pronouncing German Dictionary. From his pronounciation I have in no case departed, except where the equivalent sounds might be represented by combinations of letters more familiar to an English eye, than those chosen by the German author." After giving a list of words, whose compounds are not found in the work, the author proceeds: "Secondly, the reader *will find* all the terms denoting his profession, business; the elements of surgical, medical, obstetrical, chemical, pharmaceutical, therapeutical, pathological, physiological, and anatomical nomenclature; the various particles employed in forming questions, answers, hypothetical and declamative sentences; the words denoting the various acts of the living body in health and in disease; the words entering into colloquial conversation; the prefixes and suffixes used in forming compound words; the auxiliaries of all

the verbs." This is the scope of the not unambitious attempt to include within the brief space of 150 pages the elements of the language of Aschenbrenner, Chelius, Liebig, Mülder, Mitscherlich, Zetemeyer, Vogel, Müller, Valentin, Arnold, Förg, Henlé, Huschke, Bischoff, Wagner, Nægele, Carns, Trigand, and the many equally eminent scholars whom Germany has given to medicine and its kindred sciences. If the reader desires to form some approximative notion of the resources of this language, its variety and power of endless self-multiplication, let him turn to the word Wasser (water) in Adler's large 8vo Dictionary, and examine the *seven* columns of the compounds of this one word; Tod (death) with its *three* columns, or the articles Blut, Licht, Erd, (blood, light, earth); or the compounds of haus (house), three closely printed columns, and he will see a meaning in the language of Klopstock which he could in no other way discover:

"Are we separated and forever, consequently, unmixed, as when Tacitus, our critic, observed us in the ancient times?"

Hence the utility of a dictionary which shall present within the compass of a pocket-volume the primitive materials of this vast vocabulary of 'immer neuer und doch deutscher Wendung.' But many compounds and derivatives, likely to occur in ordinary conversation, or having a peculiar signification not deducible from a knowledge of their components, or strictly technical, have been unhesitatingly admitted in both parts of the dictionary. The several terminations and prefixes are inserted in their alphabetical places, with their significations."

"The first part, English-German, has been constructed on the same general principles. Two peculiarities, however, need remark, viz., that the lexicon contains a number of *latin* words with their German equivalents: 1, all the names of the Materia Medica included in the last

edition of the National Pharmacopœia; 2nd, the most usual of the latin technical terms employed in chemical language. The English-German part is chiefly drawn from Adler's reprint of Flugel's work, published at London under his name, though compiled by Hiemann, Feiling, and Oxenford, and characterised by his American editor as "at present the most complete, and the most judiciously prepared manual of its kind in England."

As to the reliance that may be placed upon this work, the author says, and we think truly: "Much care has been bestowed upon this department to select the words most closely equivalent to the English term taken in its medical signification, to secure *exactness* and *definiteness*, where in general the most annoying looseness and unsatisfactoriness prevail."

Of the pronounciation adopted throughout the book, Ochlschlager says: "I shall only insure those persons, who make use of this Dictionary, and pronounce according to the pronounciation given, after having carefully studied the directions, that they will be understood by *all classes* of Germans, however differently they themselves may pronounce."

We have thus let the author set forth the characteristics of this Clinical Phrase Book, because we are satisfied of the correctness of his descriptions. An extended examination of the book has satisfied us, not only of its great value, but of its utility. As an aid to the medical man in his intercourse with German patients, we could scarcely say too much in praise of the work, and we warmly commend it to the attention of medical men. Through the knowledge that may be obtained from the Clinical phrase book, they may not only facilitate their practice among Germans, but may hold intercourse with the great minds of German literature.

These books may be obtained at the bookstore of E. Maxwell & Co.

ART. VII.—*A Treatise on Lightning Conductors*; compiled from a work on Thunderstorms, by S. W. HARRIS, F. R. S., and other standard authors. By LUCIUS LYON, A. M. New York: George P. Putnam. 1853.

We need scarcely make an apology for noticing this work in the Review department of the Western Journal of Medicine and Surgery. Medical men are often consulted on the various subjects connected with the use of lightning rods, because the people, who are ignorant on all the field of electrical matters, think that medical men should be familiar with everything on the subject. It is a source of regret that medical men are not always as much entitled to this confidence as they should and could be, and if they do not confess ignorance, they do worse—they give erroneous advice which, when faithfully followed may end in loss of life to the credulous inquirer. It must be confessed that grievous errors on electrical subjects prevail in many works of authority; facts are misstated, inferences are wrongly drawn, assumption takes the place of established truth, and presumption usurps the position of science. Yet, when we look at the disastrous powers of lightning, and know how often it destroys life by an instantaneous effect, we see how necessary it is that every human being who feels interested in living shall know the whole truth on the subject of electrical laws. The mind of man is capable of disarming this terrible agent of its destructive powers, and to that important point every consideration should be given.

The treatise before us is a very thorough and satisfactory exposition of all that species of knowledge that is needed upon the subjects of electricity, and the means of guarding against its evils. The author very truly and properly says:

"There can be no doubt of the utility of such a book as is here presented. After expending large sums of

money for the most approved apparatus of rods, many persons have been bitterly disappointed in their expectations, and have received no adequate return for their outlays. The truth is, that our countrymen have not acted on this subject with that shrewdness for which, in other things, they are proverbial. They have taken too much upon trust, and neglected the investigation of the facts. The iron conductors, put up at no inconsiderable cost, and supposed to secure perfect safety to the structures which they surmount, instead of proving themselves faithful sentinels and guardians in the hour of peril, have too often turned traitors, and invited the destruction which they promised to avert. The "swift fire of Jove, hurled by his red right arm," has not unfrequently bolted from the iron track, prepared for its harmless descent, and, indignant at some defective joint, or sudden break, or the want of sufficient metal for its free discharge, has made a forcible passage for itself, often leaving shattered walls, and chimneys, and blazing roofs, to attest its terrific power. Happy for the sufferers if the blasted corpse of some loved one has not added unutterable woe to the desolation of the scene!

Such disastrous consequences are due, in part, to imposture, but far more frequently to the ignorance and carelessness of workmen, and to the blind credulity of those who have employed them. In many instances, too, the owners of property have suffered an apparatus, originally well adjusted, to get out of repair. The distrust which might have arisen from these accidents, has no doubt been mitigated or prevented, in a great degree, by the difficulty of detecting any defect in a system of conductors—a philosophical knowledge of the scienc of electricity often being requisite for doing so.

Partly from the imperfections alluded to above, but much more from the unnacountable apathy which exists on the whole subject, a very large proportion of the owners of buildings in this country, and probably a still greater proportion in other countries, have neglected to avail themselves of the lightning conductor in any form. An incalculable amount of property, and many lives, which might be made at least relatively secure, are thus constantly and needlessly jeopardized. How great a risk is incurred, and how nearly absolute safety is attainable

by conductors, the author hopes to demonstrate in the following pages."

The work opens with a consise, or rather a condensed series of views of natural and artificial electricity, which contain some of the best arranged truths on the subject that we have met. This portion of the work deserves thorough study by all who are interested in the phenomena of electricity, and who is not? We can scarcely find any portion of this part of the work that can be abstracted from the rest, because of the intimate relations that all the parts hold towards one another. But we must ask the reader's attention to the following, on account of its great interest, and because the phenomena thus detailed are not sufficiently known and understood. But a few weeks since, about the 17th of May, there was an exhibition of the phase of electricity set forth in this extract, in a lumber yard in this city. There were four persons in the vicinity of the disaster. One of the four was driving a wagon, and he sat on one of the four horses; another was on the hounds of the wagon, another walking behind the wagon, and a fourth was near another wagon. An ascending stroke of electricity killed the negro driver, and the horses of his team, and lifted the wagon two feet up, above the ground. The man on the hounds was uninjured. The man between the two wagons was struck across the abdomen, and felt a burning sensation for some hours after, and the fourth felt a similar sensation in one of his legs.

The phenomena of the ascending stroke are thus set forth:

Sometimes the thunderbolt passes from the earth to the clouds, and in this case it is called by some philosophers the "ascending stroke," by others "the returning stroke." Facts are not wanting to indicate the progress of electricity upward. The Marquis Maffei was the first who observed this curious phenomenon. He distinctly saw, during a storm, the lightning issue from the ground

with a loud noise. The Abbe Lioni and M. Segnier of Nismes, saw the lightning rise in the form of flame six feet high, followed by a loud noise.

One of the most interesting cases of the ascending stroke has been recorded by John Williams, Esq. It took place upon the hills above the village of Great Malvern, on the 1st July, 1826. A party had taken refuge from the storm in a circular building roofed with sheet iron, and one of the ladies on entering the hut expressed her alarm lest the lightning should be attracted by the iron roof. They had scarcely entered their retreat, and were about to partake of some refreshment, when a violent storm of thunder and lightning came on from the west. About forty-five minutes past two, a gentleman who stood at the eastern entrance, saw a ball of fire which seemed to him moving on the surface of the ground. It instantly entered the hut, forcing him several paces forword from the doorway. On his recovering from the shock, he found his sisters on the floor of the hut, fainting, as he imagined, from terror. Two of the ladies had died instantly; another lady, and the rest of the party, were much injured. The explosion which followed the flash of lightning, was said, by the inhabitants of the village, to have been terrific. Mr. Williams, who immediately examined the hut, found a large crack in the west side of the building, which passed upward from near the ground to the frame of a small window above which the iron roof was a little indented. Mr. Williams conceived it to be quite clear, from the place of the fragments of stone and other appearances, that the clouds were negatively electrified during the storm.*

A very curious instance of the ascending stroke is related by G. F. Richter, in his work on thunder. He informs us that in the cellar belonging to the Benedictine monks of Fontigno, while the servants were employed in pouring into a cask some wine which had been just boiled, a fine light flame appeared round the funnel, and they had scarcely finished their operations, when a noise like thunder was heard; the cellar was instantly filled with fire; the cask was burst open, although hooped with iron, the staves were thrown with prodigious violence

* *Encyclopædia Britannia*, vol. 8, p. 619.

against the wall, and, on examination, a hole of three inches diameter was found in the bottom of the cask.*

On the 24th of February, 1774, lightning struck the steeple of the village of Rouvroi, to the northwest of Arras. A pavement composed of large blue stones, which was laid under the steeple was violently raised upward.

In the summer of 1787 lightning struck two persons who had taken refuge under a tree near the village of Tacon, in Beaujalois. Their hair was *driven upward and found upon the top of the tree.* A ring of iron which was upon the shoe of one of these persons was found afterwards *suspended on one of the upper branches.*

On the 29th of August, 1808, lightning struck a small building near the hospital of Salpétrière in Paris. A laborer who was in it was killed, and after the event the pieces of his hat were found incrusted on the ceiling of the room.

When trees have been barked by lightning it frequently happens that the bark is stripped from the base *upward* to a certain height, and the upper part of the tree is untouched. This occurred with several trees in the Champs Elysées, at Paris, in a storm which took place in June, 1778.

The leaves of trees which have been struck by lightning often exhibit the effects of heat on their lower surfaces, but not at all on their superior surfaces.

Among the numerous manifestations of the discharge of electric matter from the surface of the earth, one of the most circumstantial and authentic is due to Brydone, who, being on the spot where the occurences took place, was in part witness to them, and collected the particulars from other eye-witnesses with scrupulous care.

On the 10th July, 1785, a storm broke out between noon and one o'clock, in the neighborhood of Coldstream. During its continuance, there occurred in the surrounding country several remarkable accidents.

A woman who was cutting grass on the banks of the *Tweed*, was suddenly thrown down without any apparent cause. She called her companions immediately to her aid, and told them that she received a sudden and violent blow on the soles of her feet, but whence it proceeded

* *London Encyclopædia*, vol. 8, p. 59.

she could not tell. At the moment this happened there was neither thunder nor lightning.

A shepherd attached to a farm called Lennel Hill, saw a sheep suddenly fall, which the moment before appeared in perfect health. He ran to raise it from the ground, and found it stiff dead. The storm was then approaching, but distant.

Two coal wagons, driven by two boys, seated on the benches in front of them, had just crossed the *Tweed*, and were in the act of ascending a hill on the banks of the river, when a loud explosion was heard like the report of several guns fired nearly together, and unattended by any rolling or continued sound like that which usually accompanies thunder. At the moment of this explosion the boy who drove the second wagon saw the foremost wagon with the two horses and driver suddenly fall to the ground, the coal being scattered about in all directions. On examination, the driver and horses were found to be stiff dead. The coal which was dispersed had the appearance of having been for some time in the fire. At the points where the tires of the wheels rested at the time of the explosion, the ground was found to be pierced by two circular holes which being examined by *Brydone* half an hour after the occurrence, emitted a strong odor resembling that of ether. The tires of the wheels showed evident marks of fusion at the points which were in contact with the road at the moment of the explosion, and at no other part. The hair was singed on the legs and under the bellies of the horses, and by a careful examination of the marks left in the dust of the road where they fell, it was apparent that they must have been struck suddeuly stone dead, so that no life remained when they touched the ground. Had there been any convulsive struggle, the marks would have been visible. The body of the driver was scorched in different places, and his dress, shirt, and particularly his hat, were reduced to rags. A strong odor proceeded from them.

All the witnesses of this occurrence agreed, that no luminous appearance whatever attended it. The driver of the second wagon was conversing with his comrade, and was looking toward him at the moment he was struck down, being at about twenty yards behind him, but saw no light. A shepherd standing in an adjacent field, told

Mr. Brydone that he had his eye on the wagon at the very instant of the explosion, but he saw no light. He saw a vortex of dust arise at the place of the explosion, but unaccompanied by any luminous appearance. Finally, Mr. Brydone himself at the moment of the event was standing at an open window, with a watch in his hand, explaining to the persons around him the method of calculating the distance of the lightning by observing the interval between the flash and the thunder, and he heard the explosion, but perceived no light.*

Professor Dewey, D. D., of Rochester University, related to the writer some few months since, that during his connection with Williamstown College, Mass., a church in South Williamstown was struck by lightning. The house was carefully examined by himself after it was struck, when he saw leaves of flowers that had grown by the walls of the church, lodged in the cobwebs up under the eaves.

Some time last summer Mr. Platt's house, Deep River, Connecticut, was struck by lightning. After the accident, the house was carefully examined by myself and many others. It was evidently an instance of the "ascending stroke." The front part of the house, including the entire length of the wing attached was traversed by the lightning, leaving marks of terrific violence wholly unaccountable, unless done by an upward force.

We have multiplied the number of instances under this head, for two reasons: First, because so many of those little read in electrical science utterly disbelieve the existence of an upward stroke, and even laugh at the idea as absurd and whimsical. Secondly, because an intelligent belief in an upward stroke has an important relation to the application of lightning conductors for the protection of buildings, as we shall presently see.

Various electrical phenomena, of a very interesting kind, have been observed by travellers, when ascending lofty mountains. In 1767, M. M. Saussure, Pictet, and Jallabert, when on the top of Mount Breven, received small electric shocks at their finger-ends, by stretching out their arms, and a whistling noise even accompanied them. The gold button on M. Saussure's hat yielded

* Dr. Lardner's *Lectures on Science and Art*, vol. II., p. 72.

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* Dr. Lardner's *Lectures on Science and Art*, vol. II., p. 72.

distinct sparks. In 1814, a party of Englishmen experienced similar effects on Mount Ætna, during a storm of thunder and lightning, accompanied by a fall of snow. One of the party felt his hair moving, and upon raising his hand to his head, a buzzing sound issued from his fingers. The rest of the party experienced the same sensations, and by moving their hands and fingers they produced a variety of musical sounds, audible at the distance of forty feet. On the 27th of June, 1825, Dr. Hooker and a party of botanists witnessed effects like those described, during a fall of snow on Ben-Nevis, when there was no thunderstorm. The snow fell very heavily for nearly two hours. Soon after it began, a hissing sound was heard every where around them, and continued about an hour and a half. It seemed to proceed from every point in the vicinity; and on arriving at the cairn on the summit of the mountain, they could almost determine the stones from which the electricity issued. The hair of several of the party exhibited, when touched, the usual electrical phenomena.*

The second section of the work is devoted to the "Application of metallic conductors to the defence of buildings and shipping from lightning," and every page is full of interest. We make room for the observations on the "Nature of lightning rods:"

The damage sustained by buildings and ships in thunderstorms being invariably found to occur in the spaces where good conductors of electricity cease to be continued, it became an important question in practical science, how far it would be desirable to provide at once a continuous line of conduction, through which the electrical discharge might be transmitted without any immediate explosion, and consequently without damage to the general mass. An idea first suggested by the American philosopher, Franklin, and since carried effectually into practice under the form of a lightning rod.

The application of such a rod to a building or ship, is evidently equivalent to the uniting into a continuous conducting train, all the detached metallic masses betwee

* *Encyclopædia Britannica*, vol. viii., p, 620,

which damage ensues, and in the case of particular buildings, into the construction of which such masses do not enter, it supplies the degree of conducting power requisite for their safety. A conducting rod, therefore, in whatever way it may be applied, is to be considered merely as a means of perfecting the conducting power of the whole mass, so as to admit of intense discharges of lightning being securely transmitted, which otherwise would not pass without intermediate explosion and damage; for it must never be forgotten, as an important feature in the consideration of this question, that the materials of which buildings and ships are composed, are for the most part such as come under the denomination of conductors (p. 8); the whole fabric is, therefore, to a greater or less extent, an electrical conductor. Now the chance of its escaping damage from a discharge of lightning, increases with its power of transmitting the electrical action by which it is assailed. If we could suppose a ship or building to have a perfect conducting power in all its parts, or if we imagine it to be metallic throughout, then damage from lightning would be unknown. Thus discharges of lightning struck repeatedly on the iron steamboat which accompanied Lander in his last attempt to explore the interior of Africa, without producing the slightest effect on it; whilst vessels built of wood and metal were damaged. A man in armor would certainly be safe in a thunderstorm, from the great conducting power of the metal as compared with the human body. The great object, therefore, to be attained in the application of lightning conductors to the defence of buildings and shipping from lightning, is to bring the general mass as nearly into this state as possible.

It has already been observed (p. 9), that Mr. Cavendish determined the conducting power of iron to be, in relation to that of water, as four hundred millions to one. Taking therefore the conducting power of water as unity, and assuming it as the value of the mean conducting power of the general mass of a building, which is upon the whole not far from the truth, then, by giving a building a lightning conductor of great capacity, and connecting it with the detached masses of metal as far as is possible, we multiply its chance of escaping damage, in the intermediate points in which the conductor is ap-

plied, four hundred millions of times; and considering that by the laws of electrical action, the electrical discharge finds its way through any line or lines, which upon the whole offer the least resistance to its passage, nothing can be clearer than the deduction, that any incapacity of the building as a whole, to transmit the charge through its parts without explosion, would be supplied by the presence of the conductor; and hence this multiplied chance of escape applies equally to the whole building. It is therefore demonstrable by physical facts, that perfect security is to be derived from an efficient conductor properly applied.

The first lightning conductor seen in England was erected by Dr. Watson at Payneshill, in 1762. In 1769 the Jacob tower at Hamburg was defended by a lightning rod, and after the cathedral church at Sienna had been repeatedly damaged by lightning, a similar means of protection was employed there also. The inhabitants first regarded the rod with terror and apprehension, and called it a Heretic Rod; but on the 10th of April, 1777, a thunderstorm occurred, and there fell on the tower a heavy stroke of lightning, which was carried off by the rod, without doing the slightest damage even to the gilded ornaments near which it passed.* The inhabitants now began to look on the heretic rod with more confidence; and it is an important fact, that this church does not seem to have suffered from lightning since.

But our waning space admonishes us to rest the subject here. We shall resume and finish the review in our next number.

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* Marbuch, *Enkyklopædia*, vol. i., p 314.

SELECTIONS

FROM

FOREIGN AND HOME MEDICAL JOURNALS.

Ovariotomy, its propriety.—Without in the least degree coming forward as advocates of the operation, but considering that it has been, and still is, occasionally sanctioned and performed by men of ability and great knowledge, and that we read of successful as well as unsuccessful cases, we do think it would have been more to the purpose if Dr. Lee had entered fully into the question, and more effective than a sweeping expression of opinion. We will try to supply Dr. Lee's omission very briefly.

The objections to the operation adduced by Dr. Lee are—1, the great mortality, which, according to his tables, is 1 in $2\frac{2}{3}$; 2, the extreme difficulty of diagnosis, so as to be sure that the case is one which will offer no obstacles to the removal of the tumour; 3, the possibility of prolonging life considerably by other means.

To this it is answered, by the advocates of the operation:

1. Undoubtedly the mortality is very great—1 in $\frac{15}{42}$ according to Dr. Lee, 1 in 3 according to others; but a mortality nearly, if not quite, as great, is not considered a fatal objection to other operations. If we take the major amputations of the limbs (primary and secondary) it appears that in Paris, according to Malgaigne, the mortality is upwards of 1 in 2; in Glasgow, it is 1 in $2\frac{1}{2}$; in British hospitals, it is 1 in $3\frac{1}{2}$. As to amputation of the thigh, Mr. Syme observes—"the stern evidence of hospital statistics shows, that the average frequency of death is not

less than from 60 to 70 per cent." Of 987 cases collected by Mr. Phillips, 435 proved fatal, or 44 per cent. Mr. Curling states—"On refering to a table of amputations in the hospitals of London, performed from 1837 to 1843, I find 134 cases of amputation of the thigh and leg, of which 55 were fatal, giving a mortality of 41 per cent." Of 201 amputations of the thigh performed in the Parisian hospitals, and reported by Malgaigne, 126 ended fatally. In the Edinburgh hospitals, 21 died out of 43. Even if we take much larger numbers, we find the mortality very high. Mr. Inman has collected 3586 cases of "amputations generally, primary and secondary, for accident or disease, and the deaths are 1 in $3\frac{1}{10}$." In 4937, published by Mr. Fenwick, the mortality is 1 in $3\frac{1}{15}$.

The result of amputation at the hip joint is still more unfavorable. Mr. Sands Cox has sbown, that of 84 cases, 26 were successful, and 58 unsuccessful.

Again, take the operation for hernia. Sir A. Cooper records 36 deaths in 77 operations; and Dr. Inman, 260 deaths in 545 cases. Or, the ligature of large arteries, of which Mr. Phillips has collected 171 cases, of which 57 died; Dr. Inman, 199 cases, of which 66 died. Of 40 cases of ligature of the subclavian artery, 18 proved fatal. Ligature of the innominata has, we believe, been fatal in every case.

So that, taking the mortality at Dr. Lee's estimate, it is not higher than that of other operations, which are admitted to be justifiable notwithstanding.

But, although these figures show that as high a mortality occurs in other operations as in ovariotomy, we beg to remark, that the necessity for the operation is much more urgent in the former: in many cases it is the alternative of immediate death. Further, the operation of ovariotomy is of two kinds—by the long and short incision; and the advocates of the latter point to their statistics, which give a mortality of 4 in 23 cases, or nearly 1 in 6; whilst, according to Mr. Safford Lee's tables, that by the long incision is 1 in 3.

2. The errors in diagnosis have been very great, and the fair inference therefrom is, that the diagnosis is difficult and obscure. But, unless it can be proved that all improvement in this department is impossible, it is clear the argument cuts both ways. If the present deficient di-

agnosis entails an increased mortality, it is certain that every improvement will by so much reduce it. And we can see that it is possible that this may occur, for if all who have operated had the means of adequately ascertaining the actual presence of a tumor, of being sure that it is an ovarian, of determining the amount of adhesions, and had been sufficiently attentive to the constitution of the patient, it is clear that many of the recorded operations would never have been undertaken, and equally clear that many of the deaths would have been avoided, as a cursory glance at Dr. Lee's tables will prove. Moreover, it seems highly probable that a more accurate knowledge of the contents of these cysts may lead to important results as to the selection of the more promising cases for the operation, which may yet further diminish the mortality; and lastly, it is quite possible, that some beneficial modification of the mode of operating might be adopted.

3. With regard to the prolongation of life by palliative treatment and repeated tapping, it is not easy to estimate the exact gain; it would have been a valuable argument if Dr. Lee had given us a collection of cases to show the amount of prolonged life thus obtained. If the patient be otherwise in good health, and the ovarian tumor increase very slowly, it is true that years may elapse, under careful treatment, without much distress, or any necessity for measures involving risk. In such cases life will be best prolonged by letting the patient alone. But with those that increase rapidly, and to such an extent as to occasion inconvenience and distress, or to threaten life, something must be done to afford relief, and tapping has been the ordinary resource. We have, however, but few statistics to show the results. The only statement of the kind within our reach at this moment is one by Mr. Southam, who, in twenty cases, found that "fourteen died within nine months of the first operation, four of whom survived it only a few days. Of the remaining six, two died in eighteen months, and four lived for periods varying from four to nearly nine years. It further appears that paracentesis does not prolong life, on an average, for more than eighteen months and nineteen days, and that one in four dies from the effect of the first operation." Undoubtedly, these numbers are too small to enable us to form a correct judgment; but, so far as they go,

they do not advocate very strongly the operation of tapping.

From this brief summary it appears that the admissibility of the operation will depend not so much upon the rate of mortality hitherto, as upon future improvements in diagnosis; and when we see men of high intelligence like Drs. Simpson and Bennet, Southam, Walne, and Frederick Bird, devoting themselves to this task, we cannot doubt that a decided and practical advance will be made.

Having laid these facts before the profession, we shall leave it to decide how far Dr. Lee's condemnation is just. —*Brit. and Foreign Medico-Chirurgical Review.*

Removal of an Ovarian Tumor. By G. W. Bayless, M. D. of Hazlewood, Mo.—In a letter, addressed to Prof. Pope, the writer says: "When I last saw you, I told you that I had another ovarian case, and expected to operate on my return home. I have recently, (the 15th of January,) operated and lost my patient: and as there are some points of interest in the case, I doubt not a brief account of it would be acceptable to you. Except a few of the leading facts in the general history of the case, I will give only its surgical history.

The patient was of small stature, of very delicate form, fair complexion and light hair; she was twenty years of age, married, and the mother of two children, the younger of which is five and the older seven. About four years ago, she was observed by her friends to be enlarged, and was regarded by them as pregnant. So that the disease may be said to have been of between four and five years standing.

I first saw her in August last, on account of a supposed uterine polypus. She had none. Her abdomen was very much enlarged, and from the history of the case I thought it ovarian disease. I tapped her as a *means of diagnosis.* [I will remark here, that, from my observation in four cases of multilocular ovarian disease, *tapping* is an important *means* of diagnosis. Generally one cyst outgrows the rest, and its accumulated fluid so distends the abdomen as that the tumor or tumors cannot be felt. When the fluid is drawn off, the character of the disease is easily recog-

nised through the laxed abdominal walls.] Such was the result of tapping in this case, as well as the others referred to. Some four or five gallons of fluid were drawn off.

The general health of the patient at this time was tolerably good, and the tapping relieved the only difficulty —slight embarrassment of respiration; no inflammatory symptoms followed the tapping; but in six or seven weeks the fluid had re-accumulated. This was the only time she was tapped.*

Early in November, she took a severe cold, which prevented my operating at that time. By the middle of January, she had recovered from the cold, and her general health was pretty good. I considered the case a very favorable one for the operation; 1st. Because of the *spare, delicate* person, as less liable to have inflammation. 2ndly. The patient had been tapped but once, and the operator would probably not have extensive adhesions to encounter. The result proved the correctness of this latter expectation, and probably also of the former.

The *operation* was commenced by tapping, for the purpose of reducing the size of the tumor. *Three gallons* of straw colored serum were drawn off. The patient suffered no exhaustation from this, and was at once placed on the table. She was put under the influence of chloroform, which acted well. The incision was carried from just below the umbilicus to within two inches of the pubis, and was six inches long. The tumor, upon which the abdominal walls retracted immediately after the tapping, presented itself at the opening, but so large as to require further reduction in size before it could be brought through my opening, which I did not wish to enlarge. This reduction was effected by plunging the scalpel into several of the cysts and evacuating their contents. A gallon or more of fluid was in this way discharged. The tumor was now squeezed through the opening, and but two adhesions were found—*one*, a band of false membrane extended from the side of the fold peritoneum that holds

* Repeated tappings tend greatly to embarras the operation of extirpation, by causing adhesion of the tumors to the walls and organs. This is my experience in the former cases. My successful case was tapped seventeen times.

the sigmoid flexure in its place to the side of the tumor near its top, adhering only by a surface as large as the end of the finger. The band was about five inches long, one and a half wide at base, a half inch at tip. The tumor had evidently contracted an adhesion to this reflexion of peritoneum in its ascent from the pelvis, and stretched the false membrane in its further ascent into the abdomen. This false membrane was colorless, (devoid of red vessels,) analogous to cellular tissue, as is always the case in those of ancient formation. I have thus minutely described this structure, because it is one of only *three* that were cut within the cavity, and the only cut surface within it that was not tied. It was clipped loose from the tumor, and after examination to see that no blood was escaping from it, it was suffered to pass back into the cavity.

The *other* adhesion to the tumor was the fimbriated extremity of the left fallopian tube, which was spread out on the side of the tumor, much after its fashion when embracing a graffian vesicle. The whole extremity of the tube was quite red, and when dissected from the tumor, exhibited an extensive irregular surface from which the blood *oozed* freely. I put a strong ligature around the tube itself one and a half inches from the uterus, and cut it off. No farther escape of blood took place. The *pedicle* of the tumor was now its only remaining attachment—this was something over an inch wide—I put a strong silk cord around it, and tied it very firmly. The pedicle was separated and the tumor removed. Not a drop of blood escaped from the pedicle, and I dont think that more than three ounces were lost during the operation. After I had satisfied myself that there were no *bleeding vessels* any where, I asked Dr. Wood, of Liberty, (formerly of St. Louis,) and another old physician, to examine if there was any? They did so, and reported none. (I was thus particular, because the case looked so favorably, that I wanted to make it absolutely certain of a successful result.) The incision was now closed by a number of twisted sutures, adhesive strips compressed and a parturient bandage. The pulse continued good during the operation, which lasted eighteen minutes according to a bystander; and the effects of the chloroform being allowed to subside, the patient waked up and expressed herself as feeling comfortable. She had suffered no pain and

would not believe that the operation had been performed. In half an hour she was removed to bed, and said she felt no inconvenience except soreness. The operation was completed half past 12, P. M. In an hour and a half after the operation she had *slight* rigors that lasted a few minutes. Re-action came on but it was moderate, pulse about 100, but soft and compressible. There was no pain, no heat of skin, but there was excessive thirst. Cold water and ice were allowed, but as soon as any accumulation took place in the stomach it was thrown up. The *thirst* was the only unpleasant condition of the patient, and towards night this abated somewhat. I staid with her until bed-time, when the thirst had lessened, and she was otherwise doing well. I ordered morphine, and left her in charge of the family physician and another intelligent young physician; the latter of whom, a relative of the patient, staid in the house.

At half past two, a messenger brought me word that the patient had not slept; in other respects as I had left her. I directed the morphine repeated, to produce sleep. One portion had the effect—and at half past three, the young doctor (who staid with her) went to bed, leaving her asleep, pulse good, and, as he thought, in better condition than at any time since the operation.

At six o'clock, the family physician (who was up with an obstetrical case) saw her, and found her sleeping so quietly, that he made no examination of the pulse, for fear of disturbing her. At day-light, I went to see her, and found her pulseless or nearly so, and with hurried, difficult respiration, and great distress. She was manifestly sinking very rapidly. What was the cause? This question was necessary to any treatment. It surely was not the shock of the operation, for that was slight, and had long since, passed off. There had been no symptoms of inflammation, and it was much too soon for it to have completed its work. *Hemorrhage* was the only remaining possible cause. It would not do to open the wound to see if my ligatures had slipped, without first bringing the pulse up by stimulants. They were freely used, but produced no effect, and at 9 o'clock, (twenty and a half hours after the operation,) she died.

On examination, I found about two quarts of blood in the abdomen—revealing the cause of her death. *But my*

ligatures were in place, and not a drop of blood could h escaped by them.

What was the source of this hemorrhage? It cou not have taken place within the cavity; for the only stru tures cut, were the pedicle, the fallopian tube, and th band of false membrane. The ligatures were found firm ly applied to the two former, and the latter was a blood- less structure, which could not possibly have furnished it. The only other possible source was the edges of the in- cision through the abdominal walls. Besides this conclu- sion, which we arrive at, by the method of exclusion, the conditions of the lips of the wound, at the *post mortem*, *positively* indicated it. *They were very loose and flabby.* If the mouths of the vessels had been plugged up, the edges would have been turgid and firm.

This was surely a most extraordinary result. The ab- dominal walls were attenuated from long continued dis- tension, and the cut surface was small. I should remark, that my incision deviated about one half an inch to the left of the median line, and took off a narrow strip of the left rectus muscle leaving it attached to the right border of the incision. But neither here nor in the whole length of the incision was there a vessel cut large enough to cause even the smallest arterial jet, none that any surgeon would think of tying in any operation. Well, the only precaution which could have been taken to guard against hemorrhage from this source, was to have left the wound open until the edges were glazed with lymph. But there is always an insuperable objection to this in this opera- tion, viz: it would be leaving the abdominal organs too long exposed to the air. The risk of exciting inflamma- tion would be incomparably greater than that from hem- orrhage.—*St. Louis Medical and Surgical Journal.*

A Case of Poisoning with Strychnine relieved by Chlo- roform. By Geo. L. Upsbur, A. M., M. D., Surgeon to U. S. Marine Hospital, Norfolk, etc., etc.—On the 30th of March 1853, I was called to see the child of Mr. F., sick with chronic diarrhœa. It was born on the 24 of January, and consequently was not quite three months old. When less than two weeks old, its bowels became disordered, and I had frequently prescribed medicine for it from the description given of the case by the father.

It took first one simple astringent and then another, with now and then an alterative dose of calomel, but nothing seemed to exercise any permanent control over the affection. The child thus became, in a short time, much emaciated and enfeebled, and I was requested to visit it on the 30th of March. Found it feverish, thirsty and restless, with movement of the bowels every hour or two, and scarcely any digestive power left. The milk was passed from the bowels in the same state as it left the stomach, and there were frequent nausea and vomiting. I ordered one of the following powders three times a day:

℞. Ext. Krameriæ gr. xv.
Pulv. Dover. gr. xii.
Pulv. Rhei gr. vj.
Strychniæ gr. 1-5th.
M. Chart. 12.

In the course of two or three days there was a manifest improvement in the condition of the patient; the nausea ceased, the dejections became less frequent and more natural, and the mother's milk seemed to agree as it never had done before. The powders were continued until 24 had been taken, when they were discontinued, and I left the child fairly convalescent.

On the 14th of April the father came to my office to say that the child's bowels had again become disordered, but there was no fever, and it was very sprightly. I ordered a tea-spoonful of infusion of rhubarb with six drops of paregoric to be given three times a day. On the 20th there had been no improvement, and I was requested to visit it. Finding it in nearly the same condition that it was on the 30th of March, I determined to give the strychnia again, and in larger doses. The following is the prescription:

℞. Pulv. Dover. gr. xv.
Cretæ Prep. gr. xxx.
Pulv. Rhei gr. viii.
Strychniæ gr. ½.
M. Chart. 15. S. A powder three times a day.

The child took the first dose at one o'clock; at two the mother discovered that it was becoming very restless—frequently starting, as it were involuntarily, and, now and then, becoming quite rigid. These symptoms gradually increased in violence until 4 o'clock, when I was

sent for, the messenger informing me that the child had strong convulsions. Arriving in a few minutes, I found the patient lying in the lap with almost every muscle in the body acting spasmodically. The spasms were tetanic, with very short intervals between the paroxysms. There was no heat about the head, nor, indeed, any feverish action, and the child's intellect was perfectly clear, as was evinced by the cry of suffering which was uttered between the paroxysms, and the earnest look for relief cast upon every person around it. The spasms resembled more nearly than anything else a violent shuddering, or agitation of the whole frame—the hands being tightly clenched, the body bent backwards, and the limbs immovably rigid.

I immediately ordered a mustard plaster to be applied down the spine, and, while I went for some chloroform, directed equal parts of brandy and water to be freely given. I was absent half an hour, and on my return found the convulsions more violent, if possible, than ever. Fifteen drops of chloroform were sprinkled on a towel, folded in the shape of a funnel, and applied over the patient's mouth and nose. In four minutes she was fully under the influence of the remedy, and snored aloud. The towel was removed, and as soon as consciousness began to return the spasms also began to re-appear, when it was again applied. The child was thus kept fully under the influence of the chloroform for four hours, at the end of which time, there being no tendency to a recurrence of the convulsive movement, the remedy was discontinued, the entire quantity inhaled being ℥ss.

For two days afterwards the child had frequent bloody, slimy stools, accompanied by a good deal of pain and fever; but these symptoms yielded readily to a blister on the abdomen, and nitrate of silver enemata, with laudanum. The child is now in better health than she has been since her birth, being four months old on the 2d inst.

Remarks.—This case presents some exceedingly interesting points. The tender age of the patient, the very small dose of strychnia—only 1-30th of a grain—the length of time that the chloroform impression was maintained, and the perfectly satisfactory result of the treatment, are all matters of great interest to the medical

man. At first I was disposed to doubt the possibility of so minute a dose of strychnia producing such violent symptoms, and began to think that some mistake had been committed by the apothecary; but, upon inquiry, I learned that the prescription had been put up by one of our most careful apothecaries, whose attention was called at the moment to the necessity of being careful in weighing the strychnia, by an older member of the firm. I do not think it probable that more than half a grain was put in the fifteen powders, so that the child could not have taken more than a thirtieth of a grain. When it is remembered, that one twentieth of a grain had, but a few days before, been given every day for eight days, without any unpleasant effects, it seems almost incredible that a thirtieth of a grain should produce such alarming symptoms.

Is it possible, that the action of strychnia, like that of digitalis, is cumulative? If so, then the convulsions in this case may have resulted from the whole amount of the poison which the child had taken from the 30th of March to the 14th of April, instead of from the simple dose of one thirtieth of a grain. But the best writers on Materia Medica do not consider strychnia to be cumulative in its action—certainly not to the same extent as digitalis—for Taylor in his work on Poisons, says, "when the dose is gradually raised, the system may become habituated to the poison, so as to resist the effects of a very large dose;" and Pereira has seen the dose gradually increased, until one grain and a half was taken three times a day, without dangerous consequences. Royle, however, remarks, "that some cases show a tendency to its becoming cumulative in its action."

I am not disposed to believe, however, that the symptoms in this case were due to the cumulative action of the poison. The medicine was entirely discontinued on the 6th of April, and was not resumed until the 14th, eight days after. The symptoms, too, followed the administration of the powder on the 14th too quickly, and were too marked in their character, to be attributed to any other cause than the powder; so, that after a careful review of all the attending circumstances, and without a desire to give undue weight to any one of them, I am satisfied that the child was poisoned by only the thirtieth

of a grain of strychnia, and that the dose would have been fatal but for the chloroform.

This is probably the smallest dose of strychnia that ever produced symptoms which threatened to destroy life. Taylor quotes from the *Brit. Amer. Journ.* for Aug., 1847, the case of Dr. Warner, who was killed in fourteen minutes by taking half a grain; and Dr. Watson reported a case, in the *Med. Gaz.*, for 1845, of a girl, æt. 13, who died from taking three quarters of a grain; but in both these cases the dose was larger, in proportion to the age of the patient, than in the case herein reported.

The magic effect of the chloroform deserves some notice. Its impression was maintained for four hours with the happiest results. In less than five minutes the child became perfectly composed, and soon was in a profound sleep. At every recurrence of the convulsive movement, two or three inspirations were sufficient to produce perfect composure, until the force of the poison had expended itself, when the chloroform was discontinued, and the patient recovered without further serious symptoms.

In conclusion, I may be permitted to say, that I report this case only for what it is worth. As I have said elsewhere in the pages of this Journal, it is very unphilosophical to deduce any general principle in therapeutics from a solitary observation, and, therefore, in giving this case to the public I do not intend to commit the error which is so often committed—that of seeking to establish a permanent law from the treatment of a single case. I merely give the facts, viz: that I administered the thirtieth of a grain of strychnia to a child three months and twelve days old; that, in a short time, the child had all the serious symptoms that are attributed to a poisonous dose of strychnia, and which, to all appearance, would have destroyed life had they continued; and that it was kept under the influence of chloroform for four hours, and recovered without having any return of spasm or other serious symptom. I believe the recovery was due to the chloroform.—*Medical Examiner, Philadelphia.*

Case of Double Monster—Morbid states of the Placenta. By Wm. F. Montgomery, A. M., M. D., etc., Dublin.—March 6th, 1851, Mr. O'Donovan was called to Mrs. L., aged 35, mother of three children, and seven months pregnant of her fourth, in very delicate health; her abdomen enormously enlarged, having the appearance of a twin pregnancy in the ninth month; lower extremities œdematous; and she was exceedingly weak and dispirited; former pregnancies favorable.

11 o'clock, P. M., labor set in rapidly. Mr. O'Donovan found the membranes ruptured and the room deluged with the waters; the feet and legs of a child were protruded, cold and livid; at the orifice of the vagina appeared what at first seemed a hand, but being pushed down it was found to be a third leg, then a fourth leg was discovered and brought down.

By passing the finger round the fœtus, Mr. O'Donovan found that the body was single at the umbilicus, the cord lying in the cleft, and a portion of intestine protruding. He assisted the pains, which were few and weak, gradually drew down the body, and, having hooked down the arms, delivered the woman of a full-grown monster fœtus, with two heads and two sets of extremities; the placenta soon descended and was removed; the heads passed one after the other, moving, as it were, on a central point, the junction at the neck. There was imperfect contraction of the womb, and a tendency to hemorrhage, which, however, Mr. O'Donovan was enabled to prevent by the usual means, and the mother ultimately did well.

"No description," says Mr. O'Donovan, "can convey an idea of the horrible appearance of this monster: the heads taken together were much larger than the head of a full-grown healthy child, and were fully developed; the faces fronting and applied to each other, the mouth of the one being received into that of the other, which was a large chasm, the line of junction commencing at the lower lip and continuing perfect to the umbilicus; the thorax of each was well formed and distinct except for the juncture; at the dorsal vertebræ, and opposite the umbilicus, the bodies were drawn towards each other as if compressed by a cord. The gross bulk of the double monster was equal to that of a single child of nine months;

each head was as fully ossified as a natural fœtus of the same age, that is, seven months. The abdominal parietes were deficient at the junction of the funis, where there existed only a thin diaphanous membrane, as if an expansion of the sheath of the cord itself; the arms of the children embrace each other as in the form of a figure of 8. The placenta was about the natural size, part apparently healthy, but nearly a third *presented a vast collection of hydatids.* No examination would be permitted."

Mr. O'Donovan has lately informed me that the lady was again confined last month (February), under his care, of a healthy, full grown, female child, and had a most favorable labor.

I may observe, in reference to this case, how often anomalous or morbid states of the cord or placenta are, as indeed we might anticipate, found in connection with malformations or monstrosities of the fœtus; hydatid degeneration of the placenta is often met with, not only accompanied by extreme atrophy of the fœtus, but frequently no trace of it is left remaining.

One of the ugliest and most disgusting-looking monsters I ever saw was connected with an enormous placenta, whose substance was quite unravelled, and the separate branches of capillaries hung down like minute stalactites, at least two inches long, while the twin brother of this monster was a comely child, attached to a healthy placenta and cord.

Such a relation between morbid anomalies of the placenta and malformations or monstrosities in the fœtus must cease to surprise us when we consider that the placenta is, in fact, the organ or apparatus by which the whole *pabulum vitæ* is supplied for the development and support of the child during its intra-uterine life, and if this supply is tainted at its source, or interrupted by morbid changes therein, we can readily understand to what a degree the evolution of the embryo is likely to be thereby affected.

Hence it is, that in those perplexing cases so frequently met with, in which women are, in several successive pregnancies, delivered of dead children, without any discoverable constitutional disease or infirmity in the mother, an examination of the placenta so frequently discloses

to us morbid alterations quite sufficient to explain the distressing result. Of these I may just allude to what has been called tubercular disease of the placenta, apoplexy of its substance, hydatid degeneration, inflammation of the placenta or envelopes of the ovum, and especially if producing their adhesion to the surface of the child.

In an other instance under my observation, the cord was excessively dropsical, so as to be in some parts two inches in diameter, and in that case the child was unequally developed, one side of the body being very much larger than the other; this inequality, however, gradually disappeared, and the young lady is now of unexceptionable symmetry. "In one of the recorded cases," says Vrolik, "the superior extremities were wanting, and the anus was closed."

Serres considers the absence of one of the umbilical arteries as the efficient cause of that form of monstrosity in which there is *ectopia viscerum abdominalium*, but such a consequence does not always follow such a defect. I have in my museum a specimen of a placenta and umbilical cord with only one artery, and it was connected with a remarkably fine, healthy, and well-formed child.

This want of one umbilical artery was also observed in Sir A. Cooper's imperfect and heartless fœtus, but, with the exception of an umbilical hernia, there was no other *ectopia viscerum abdominalium*.

I have for many years endeavored to impress on my pupils the great advantages to be gained not only in the way of general pathological inquiry, but in the acquisition of a particular species of knowledge of the utmost practical value, by carefully examining the fœtus and its envelopes in every case, but especially in those cases of blight or arrested development, where the size of the fœtus is so entirely at variance with the real date of the pregnancy, a mistake on which point may lead, and has often led, to giving an opinion which may irreparably injure a really unblemished reputation.

The following case, which was recently brought under my observation, is a striking illustration of the above remark. Five months after her husband's departure for a foreign country, a lady miscarried of an ovum and fœtus, presenting the characters and development of the third

month. For more than two months and a half after the separation of the parties she had no menstruation, and had other indications of pregnancy; but she then had sanguineous discharges from the vagina, which were regarded as a return of her catamenia, and she was no longer considered pregnant. These, however, ceased, and there was again a suppression for two months and a half, at the end of which time the lady miscarried of an ovum and fœtus, presenting conditions corresponding to such a period; the result of which was a conviction, on the part of some members of her husband's family, that she must have been unfaithful to him, and it was at once decided to inform him of his misfortune. Before doing so, however, the ovum was shown to a medical friend, who, wishing to have his own judgment in so delicate a matter fortified by the opinion of another, submitted the ovum to me for careful examination, when the true nature of the case appeared at once manifest: the envelopes were in a morbid state, thickened and tuberculated, and had evidently been long separated from the vascular connection with the uterus; the umbilical cord also was diseased at its placental end, where it was expanded into a lotus-shaped sac, filled with a brownish serum. Of the true history of the case there seemed, then, no doubt; the lady had conceived just at the time of her husband's departure, her pregnancy had proceeded undisturbed until the third month, when she had symptoms of miscarriage, but did not miscarry; but the ovum was blighted, and, having lost its vitality, ceased to grow; it was, however, retained in the uterus until the expiration of five months from the date of conception, when it was expelled in the morbid state already described. This explanation at once set at rest all the unworthy and undeserved suspicions entertained against this innocent lady, who would otherwise have been made the subject of a most painful proceeding. Facts of this kind have been heretofore insisted on by the writer in his work on the Signs of Pregnancy, and some cases related in illustration.—*Boston Med. and Surg. Jour.*—*Dublin Quar. Med. Jour.*

On Elective Elimination by the Salivary and other Secretions. By M. Cl. Bernard.—In this paper M. Bernard calls attention to the fact, that some of the secretions rapidly eliminate certain substances, while other substances equally soluble, are either eliminated much more slowly, or not at all. He relates the results of a series of experiments in which iodide of potassium, iodide of iron, lactate of iron, cane and grape sugar, and yellow prussiate of potass were injected into the veins, and the various secretions then tested for their presence.

Of these, *iodide of potassium* appeared, at latest, in from 30 to 40 seconds in the saliva, and was also rapidly observed in the tears and pancreatic juice. It required more than an hour to become detectible in the urine or the bile; and if injected in very small quantities, was not found in these at all. Introduced into the stomach, and especially fasting, it was found in the saliva in 1½ minute. The *yellow prussiate of potass* was not discernible in the saliva, while in 7 minutes it was found in the urine and abundantly eliminated; the serum of the blood also exhibiting a notable quantity in an hour and a half. It was also found in the bile, while, although it was thus circulating in the blood, no traces of it could be found in the pancreatic juice. *Grape and cane sugar* never passed into the saliva or pancreatic fluid, while it was manifested in the bile and urine, though less rapidly than the prussiate. As various authors state they have detected sugar in the saliva in *diabetes*, the author examined that of several such patients under M. Rayer's care. In none was sugar detected, although the bronchial mucus and sputa evidently contained it. The *mammary gland*, which in the normal state contains the sugar of milk in its secretion, refused passage to grape or cane sugar, even when these substances existed in large quantities in the blood. A saturated solution of *lactate of iron*, thrown into the veins, never gives rise to iron in the saliva; but when the iron is injected as an *iodide*, it obtains admission into the saliva, both the iron and the iodine being then detectible.

This expulsion of certain salts by this or that secretion, is not the only peculiarity the history of elimination presents. Some substances are eliminated rapidly and completely, while others remain within the tissues for a more or less long period. It is well known that certain of these,

as mercury, antimony, and arsenic, become localised in certain organs—e. g., the liver—and are then gradually eliminated: but it has not been noted that others, as the iodide of potassium, which are perfectly soluble, and remain soluble in the economy, wherein they circulate without enduring any accident, may remain for a certain time in the substance of the organs. Two or three weeks after iodide of potassium had been introduced into the stomachs of several dogs, and long after its supposed entire elimination by the urine, in which it had ceased to appear, it was found in the saliva and gastric juice. If, however, purgatives were employed after administering the iodine, it ceased to be detectible in a few days in any of the secretions.—*Archives Générales*, N. S. vol. i. p. 5.

A further account of Fatty Degeneration of the Placenta, and the influence of this Disease in producing Death of the Fœtus, Hemorrhage, and Abortion. By Robert Barnes, M. D. (Lond.)—The author, after referring to a paper read before the Society, in 1851, thought that the histories of the cases now submitted would be found to throw much additional light upon the pathology of fatty degeneration in an organ in which the existence of this affection had only been recently established. These cases would also, in his opinion, lead confirmation to the view he had expressed of the importance of this affection as a cause of death of the fœtus, hemorrhage and abortion. In the first case, the fœtus had attained apparently the middle period of gestation. The mother had been conscious of the death of the fœtus; she was taken suddenly with slight pains, and the child and placenta all came away together. The placenta, like the child, was free from putrefaction when sent to the author. The maternal surface of the placenta was deeply divided by sulci. Its general aspect resembles that of the brain, both in color and subdivision. All the lobes had a pale, yellow, glistening appearance, like fat; pink or red in the sulci. In the sulci, between the lobes, there was evidence of the vascular connexion with the uterus. With these exceptions, the placenta had an ex-sanguine appearance. A section showed that the yellow, fatty appearance was much more marked on the

decidual surface, while, on approaching the fœtal surface there was more appearance of blood. There was nothing like fresh, healthy placental tissue. Examined under the microscope, the villi taken from any part near the decidual surface were much altered; those from near the fœtal surface were less altered, but none were found perfectly healthy. The villi in the more consolidated lobes were brittle, misshapen; the vessels breaking up and losing their defined outline. The chorion was, for the most part, destroyed, and the nuclei in the walls of the vessels were enlarged and crammed with granules. In the less consolidated parts the vessels retained their proper size and shape. The author's view of the pathology of this case was, that the fœtus perished sometime before expulsion. All fœtal placental circulation had therefore ceased. The large vessels which still connected the placenta with the uterus, were the channels through which an imperfect utero-placental circulation was carried on up to the last. As there could have been no interchange between the maternal and fœtal blood, this circulation must have been simply to maintain a low degree of nutrition in the placenta. Granular degeneration had commenced prior to the death of the fœtus; but the granular conversion of the villi continued to increase after the death of the fœtus, until it had reached such an extent as to cut off so much of the remaining vascular communication as to leave attachment of the placenta to the uterus any longer impossible; and this gradual arrest of the circulation would explain the fact, that there was no hemorrhage at the time of labor. The next four cases were similar in general features to the last: abortion taking place from the fifth to the eighth month, the fœtus having died in utero, and the placenta presenting the characteristic conditions of the fatty degeneration just described. The sixth case was an abortion about the tenth week of gestation. There was some hemorrhage, and the ovum came away easily. The decidua in this case was very much thickened. On the uterine surface the oblique vascular openings were distinct, but it was pale and had a fatty appearance. Numerous granules of oil were seen in the cells of the decidua; the fœtal surface of the decidua presented similar appearance, but the fatty change was less extensive. The seventh case was also an abortion at the early period of pregnancy, and the exam-

ination of the parts of the ovum were given in detail. The author believed that these cases illustrated the influence of fatty degeneration in producing abortion, by rendering the villi of the chorion or placenta unfitted for their office of maintaining the nutrition of the embryo; and he thought the following considerations established the doctrine, that fatty degeneration of the placenta was really the cause of abortion: Firstly, there was no sign in case of decomposition of the placenta. Secondly, the presence of distinct indications of continued vascular connexion between the placenta and the uterus up to the moment of detachment and expulsion. Thirdly, the various degrees of progress of the degeneration in different portions of the same placenta. Fourthly, the obvious commensurate diminution of the vascular connexion between the placenta and uterus with the progress of the affection. Fifthly, the almost constant evidence of the death of the fœtus having taken place at some definite but not remote period. Sixthly, the analogical argument derived from the better known pathology of fatty degeneration in other organs; as in muscular structure of the heart, in the liver, in the kidneys, and in the bloodvessels, exhibiting unequivocally that this change took place during the life of the individual, and that, sooner or later, the resulting disorganization terminated in death. In conclusion, the author remarked, that fatty degeneration of the placenta was far from being an uncommon event. He exhorted practitioners to the employment of the microscope as the only means of investigating the abnormal conditions of the placenta. Alterations of structure in elementary tissues could not be recognised without the aid of that instrument, and he confidently believed that the morbid conditions described by various authors as examples of scirrhous disease, of atrophy, or of tubercle, might, by microscopical analysis, have been demonstrated as fatty degeneration. The paper was illustrated by a number of carefully executed diagrams and microscopic drawings.

Dr. Druitt could not let the opportunity pass of expressing his sense of the value of Dr. Barnes' researches in this new and hitherto unexplored department of pathology, from which many valuable results would probably be obtained hereafter. He remarked that it was important to collect all the facts possible, in order to discrimi-

nate trivial and accidental changes from those which were really important in the production of disease. He would mention, as an example, that state of villi of the chorion which was frequently found in abortion, in which they were bulged and ampullated, and apparently in an incipient state of cystic disease, which was believed to be the cause of the abortion. The villi of the non-placental portion of the chorion were commonly said to be absorbed after the earliest months of pregnancy; but he had constantly found them at the end of pregnancy, scattered over the chorion, of the size which they attain in the third month; but they were sometimes found in the secundines of the mature fœtus, distorted and enlarged, like those said to be in an incipient state of cystic disease, and usually loaded with dark granules of oil.

Dr. Barnes said that, considering the length of his paper, he was unwilling to trespass further upon the time of the society. He would limit himself to answering the question of Dr. Druitt. The fatty matter described as having been observed in the placental tissues had not been subjected to any test; it was a matter of simple observation. The granules or spherules of oil were characteristic in form and appearance, and it did not appear to him necessary to resort to any other test than direct observation, instructed by familiarity with the forms and appearances which fatty matter assumed in the placenta. The author was not prepared to admit that earthy or calcareous deposits had any essential or frequent connexion with fatty degeneration. He did not of course deny that the vessels of the placenta might be affected with a kind of earthy degeneration, like the arteries of the human body; but he repeated his belief that earthy deposits in the placenta did not necessarily, or in all cases, indicate a process simply the result of elimination from the blood, modified, probably by the conditions of pregnancy, and analogous, in this respect, to the effusion of fibrin he had adverted to in the paper. He wished to take the opportunity to enforce upon the attention of the Society, more clearly than the reading of the paper had permitted, the last case recorded. This was a case in which the child was born alive and healthy, at the full period, and in which, nevertheless, the placenta exhibited a considerable degree of fatty degeneration. There could not be a doubt therefore, that

fatty degeneration might arise in the placenta, apart from the death of the fœtus, apart from mal-nutrition, or from any defect of development force. Had it been the fate of this child to have been retained a few weeks longer in the womb, it must inevitably have been cut off by the progress of the disease; but it so happened that the alteration began towards the termination of gestation, and had not made such advances as to destroy the function of the placenta before the natural period of delivery. This case supplied the last proof that was wanting to demonstrate one of the main propositions he had brought before the Society, and to prove the importance of this affection as a cause of death of the fœtus and abortion.—*Lancet.*—*N. O. Monthly Med. Register.*

Strychnine as a Tonic. By Dr. Parrish.—In a paper on this subject, Dr. Parrish records several cases in which marked benefit seemingly resulted from the use of the agent. Dr. P. thus concludes: Considering the specific action of strychnine as being directed to the nervous system, and the nervous system as the great centre of power, executing through all its multiplied divisions and ramifications the controling force which is necessary to preserve the harmony of organic life, it may well be inquired whether this remedy, though an active poison in overdoses, may not be judiciously employed in a variety of cases where a permanent tonic impression is needed. We have known it to do good in prolapsus uteri, depending upon a relaxed condition of the uterine ligaments and vaginal muscles, and it has done good by expending upon those relaxed parts its specific contractile influence. It is well known that, when given in paraplegia, for example, its effect will first be seen in the paralyzed limb. Its peculiar office seems to be to lay hold of those muscles which cannot act themselves, and stimulate them to normal effort. This action is, of course, produced through the nervous centres. Why, then, in cases of leuchorrhœa depending upon general debility of the nervous system, may it not act in the same way, and by the same rule? Why, in cases of prolapsed uterus depending upon a relaxation of the tissues retaining it naturally *in situ*, may it not produce

and sustain that kind of *tonic spasm* necessary to restore it to its position, and hold it there? How else can the fact be explained? for cases of prolapsus uteri from debility have been treated by strychnine in tonic doses, with a success which pessaries and supporters could not secure.—*N. J. Med. Reporter.*

Medical Pathology and Therapeutics. Treatment of acute articular Rheumatism by Veratrine. By M. Trousseau.—We have already spoken of this treatment, but consider it of so much importance as to refer to it again. One pill, we have said, containing the tenth of a grain of veratrine, is given the first day, two the second, three the third, increasing the dose one pill each day, and it is rarely necessary to go beyond six or seven. M. Trousseau, knowing the duties of physician and teacher, has not hesitated to experiment with this therapeutical agent before his numerous students; the results have been marvellous. A woman, aged 25 years, entered his wards with a general acute articular rheumatism of three days duration, complicated with endocarditis, characterized by a souffle, to the first beat of the heart, extending itself into the calibre of the aorta, and into the arteries of the neck, plainly indicating a lesion of the aortic orifice. It was impossible to find a case more favorable for the therapeutic experiment on account of the extent and intensity of the complications. M. Trousseau gave a pill on Saturday; on Sunday there was already an amelioration of the symptoms, and he gave two pills. Monday, the fever, the inflammatory engorgement of the hands, &c., had almost disappeared; three pills were given. Tuesday, the day upon which M. Trousseau lectured upon the case, the health was perfect, except the condition of the heart. 'A fact is but a fact," remarked the learned professor, "but I can hardly attribute this result to chance." Neither can we attribute it to chance, because we have seen M Pédagnel employ this medicine with a success almost constant; and know many cases which prove its efficacy. The innocence, the insipidity, and the low price of veratrine, will make it (if farther experience confirms the facts already noticed) one of the most precious medicines which

we possess. We must not pause upon so good a road. What is rheumatism, if not an inflammatory affection, associated with the rheumatical diathesis? And on the other hand, in a number of cases, what is pleurisy, pneumonia itself, etc., if not inflammatory conditions produced by the same general influence, rheumatism? It is true that the erratic march of the inflammation establishes a sensible difference between acute articular rheumatism, and pleurisy and pneumonia, but if the principle is the same, is there not a reason for trying the same remedy? We reason with reference to the specific anti-rheumatismal power which veratrine seems to possess. But if this is not satisfactory, it may be regarded in another sense, viz: as a powerful anti-phlogistic or contra-stimulant, and as such veratrine would be indicated in a general manner against inflammation, since it has been seen in the space of three days, in the dose of six-tenths of a grain altogether, to reduce the pulse. Perhaps we are indulging in too great anticipations with regard to the results of experiments with veratrine, and it will be necessary, at least at first, to limit its application to inflammatory affections, allied to rheumatism; among which we include pleurisy, pneumonia and neuralgia. The aortic soufle persisted in M. Trousseau's patient, but this is often the case with any treatment, and M. Piédagnel asserts that there is a notable diminution of the diseases consequent upon acute articular rheumatism when it is treated with this medicine. —*Gazette des Hopitaux.*

Quinine in Rheumatism.—Our readers are aware that M. Trousseau has been appointed in the place of M. Chomel, at Hotel Dieu, where his cliniques are very popular indeed. It is a source of extreme regret to many that he has thus been forced to leave the *Hopital des Enfants Malades*, and to discontinue his usual course of Lectures during the summer on Materia Medica and Therapeutics. The treatment of acute Rheumatism by Quinine, commenced by M. Briquet, and to a certain extent discontinued, on account of the doubtful character of the termination of one or two cases in which large quantities were administered, has been very much revived of late, and the

impression respecting it gains favor daily. I have seen M. B. give it with good effect quite often. M. Valleix employs and recommends it at La Pitié, and I hope to be able to send a paper on the subject by a gentleman who attends his *Services* and Lectures. One gramme (15 grains) is administered once or twice a day, and the patient kept partially quininized. The gravity of the usual symptoms daily decrease, and it seems not at all hostile to cardiac complications. M. Trousseau, in commenting upon this and expressing his favorable impression, alluded also to the expense attending the use of this agent, accompanying it at the same time with the relation of a remarkable instance of recovery from acute articular Rheumatism, which was then in his wards. It was true, he added, that it was as yet an isolated case, but the repetition of the means used might give equally favorable results. It followed the employment of Veratrine after the method recommended by M. Daniel. The patient, a woman under middle age, suffered immense pain in the articulations, high fever, with endo-carditis exhibiting itself by a derangement of the first sound at the base of the heart—(sigmoid valves of aorta)—with a souffle prolonged into the large vessels, and accompanied with an alteration in the left ventricle also. In sixty-two hours she was absolutely cured, leaving not the slightest trace of febrile excitement, the presence of a slight souffle alone remains. One-half of a milligramme (about one-tenth of a grain) was given in the form of a pill, each day increasing the quantity, and when the pains were relieved, continuing it in the same dose every second day. Its influence on the circulation in this case was prodigious, to use M. Trousseau's expression; the pulse fell to 42, and when I heard of the patient two days after, it was still at this reduced rate. Veratrine, we are aware, is one of the active principles of colchicum, and it is, therefore, not surprising that it should possess some power in acute Rheumatism, more particularly those dependent upon the arthritic diathesis, gout, etc.—*Charleston Med. Journal.*

Successful Case of Cæsarian Section.—Dr. Decoene relates the following case of a female, aged 30, upon whom he had once before performed the Cæsarian operation. He saw the patient in the seventh month of pregnancy, November 5, 1852, together with Dr. Frédérics. She had then been forty hours in labor; and stated that, on the previous evening, she had experienced a breaking or yielding sensation in the lower part of the abdomen, followed by discharges of blood from the vagina, insensibility, and sickness. Since that time, both labor-pains and the movements of the child had ceased. The whole abdomen was very tender. Examination *per vaginam* detected a relaxed os uteri, about the size of a dollar; but neither the head nor other part of the child could be felt, although the limbs could be traced through the abdominal walls. Inasmuch as the author concluded that the uterus had given way, and the child had escaped into the abdomen, he determined upon an operation. After making the preliminary incisions, and opening the peritoneum, he came upon a mass of congealed blood, under which was a male infant, with the separated placenta, and the membranes still entire. It was easily removed: then, to the operator's great astonishment, a second child, female, came to view. Both infants were dead. The uterus, which was contracted, exhibited along its front surface a slit, answering to the line of incision of the former operation. No hemorrhage ensued; the abdominal wound was united; and, by November 24, the patient was well.

Sichel observes, in reviewing the above in Schmidt's *Jahrbuch*, that women, who have the good fortune to recover after the performance of the Cæsarian section, appear to be singularly liable to rupture of the uterus along the line of the former incision in every subsequent pregnancy. Kaysen relates six such cases. The giving way of the cicatrix in the earlier months of pregnancy may lead to escape of the ovum, and the development of an extra-uterine growth.—*Med. Times and Gaz.*, May 21, 1853

The Condition of the Fœtal Circulation in New-born Infants.—Dr. Elsasser, of Stuttgard, after 370 examinations of the fœtal bloodvessels, has arrived at the following conclusions: Of 70 stillborn children, the tubes peculiar to the fœtal circulation were open in 69. In one only, the ductus botalli and the foramen ovale were open and the ductus arantii closed. In 300 children who died soon after birth, 80 out of 108 prematurely born, and living from one to eight days, presented all the passages open; 127 out of 192 infants of the full time had all the passages open, but partly contracted.

The ductus botalli (arteriosus) was open 55 times, and completely closed 10 times; the foramen ovale open 47 times, completely closed 18 times; the ductus arantii (venosus) open 81 times, completely closed 37 times. These facts prove that the vessels peculiar to the fœtal circulation remain open, as a rule, for some time after birth, and that it is not possible to determine accurately by days the period of their closure.

The process of obliteration pursues the following order as regards time: It commences and is often completed in the ductus venosus, before it manifests itself in the other vessels. There are great varieties in the closure of the foramen ovale and ductus arteriosus. The completion of the process is, in by far the greater number of cases, within the first six weeks; and the instances of obliteration of this or that duct before birth, or before four to six weeks after birth, are exceptions, of mostly forensic interest. The ductus arteriosus exhibits the process of obliteration by the wrinkling and swelling of the inner vascular coat, commencing usually at the aortic extremity; most rarely at the pulmonary end. In the ductus venosus, the point of commencement is usually towards the vena cava: sometimes towards the umbilicus; most rarely in the middle. The blood coagulates in the ductus arteriosus; the filling up of the tube evidently comes from the thin, smooth lining membrane of the vessel; a structure, resembling an adventitious membrane, may be easily peeled off; it is mixed with blood disks and fibrinous coagula.—*Henle's Zeitsch.* 4, 1852.

Pounded Ice mixed with Linseed-Meal as a Topical Application in cases of Febrile Tympanitis.—M. Sandras, of Paris, has of late been using the above mentioned application in cases of fever connected with much abdominal heat and tympanitis. These symptoms were, in some cases, so intense that the ice melted in fifteen minutes. But as improvement was obtained, it was more than two hours in melting. M. Sandras also used the same cataplasms with much success in the case of a boy affected with severe glossitis and considerable œdema of the sublingual and submaxillary textures. We have our doubts as to the harmlessness of these applications, and great discrimination is certainly necessary in their use.—*London Lancet.*

On the Use of Creosote in Diseases of the Mucous Membranes, and in Discharges of Blood. By Dr. Arendt.—The author points out the different affections of mucous membranes, in which striking benefit ensued from the administration of creosote. In ophthalmia chronica varicosa, in conjunctivitis with ulcers of the cornea, in opacities of the cornea, he directed a solution to be dropped daily into the eye (one or two drops to the ounce of water). He quieted cardial pains with two drops in eau sucré. In fluxus cœliacus, the discharge disappeared after repeated injections, (twenty-five drops to two pints of water.) Leucorrhœa ceased within a week after injections twice or thrice a day, (two drops to one ounce of water.) A similar injection was used with effect in catarrh of the bladder. A secondary post-puerperal discharge from the uterus he cured with an injection, (two drops to five ounces of water, to be used every two hours.) A good result also ensued in two cases of metrorrhagia connected with placenta prævia. In bloody discharges from the uterus of non-pregnant women, and in cases where it did not depend on the period of childbearing or its after consequences, the injection of a solution of creosote was beneficial, but not always practicable, on account of the oblique position of the uterus, the presence of polypi, etc. Sometimes the source of the

bloody discharge is beyond reach, as when it comes from the ovaries or the Fallopian tubes. In external hemorrhages the author found the remedy extremely useful, (ten to twenty drops to the ounce of water.)—*Med. Ztg. Rupl.*, **42**, **43**. 1852.—*Ibid.*

The Inhalation of Steam in Diseases of the Mucous Membrane. By Edward Govett, M. R., C. S. L.—Having had many opportunities of testing its utility (personally as well as upon my patients), perhaps a few observations upon the subject may be found useful.

I have known the action of steam upon the mucous membrane of the air-passages, when in a state of spasm or inflammation, in some cases immediately beneficial, particularly in croup (from which disease I had when a child suffered most severely and repeatedly), also in hooping-cough and asthma. In the latter disease I have constantly seen almost instant relief, particularly in a case under my care during my homeward winter passage from Australia round Cape Horn, where the temperature was extremely low, and the winds most violent and keen, accompanied with constant wet and dampness—a state of things least calculated for the well-doing of a case of this kind. The paroxysms of coughing in one patient were violent and distressing in the extreme until he had recourse to the vapor of boiling or hot water, when the symptoms immediately began to relax, and the fit soon terminated. Such indeed was the beneficial effect of the inhalation that the poor sufferer constantly kept his "pannikin" within reach, that he might be instantly supplied with water from the galley. It is needless to say that this, unlike most other remedies for internal diseases, is brought into immediate contact with the part affected, and appears most unquestionably to possess the power of relaxing spasms and allaying irritation, an object of immense importance in the three above-named diseases.

I have also every reason to believe that great benefit would result from the adoption of this treatment in cases of pneumonia and even pleuritis. I cannot, however, adduce the result of any experience of its application in

the two latter forms of disease, having as yet never extended its employment to them, but which I certainly intend doing upon the first opportunity.

The vessel I usually recommend for the purpose is a common earthen or metal teapot, and if the opening be smaller than the general circumference so much the better, as the steam then ascends in a more compact or concentrated body. A piece of flannel should be placed around the edges that the face may not be scalded by contact with the hot metal or ware; the mouth and nose are to be kept closely and constantly applied over the opening, leaving only sufficient room for the admission of atmospheric air.—*Ibid.*

Death from Delivering a Woman with Typhus fever.—In the course of his duty as physician-accoucheur to the Royal Pimlico Dispensary, Dr. Fredericke Robert Manson was called upon to deliver a poor woman suffering from typhus fever. Dr. Manson had at the time a slight wound in the hand; through this wound the poisonous element was absorbed, erysipelas supervened, and in nine days after this occurrence his death took place. We have been informed that the patient who was the innocent cause of Dr. Manson's distressing end has herself succumbed; her nurse has shared the like fate, and it is apprehended that the list of victims is not yet complete. —*Ibid.*

Clinical Midwifery.—Turning; Transfusion. By Chas. W. Turner, Esq., M. R. C. S., Surgeon to the Dispensary, etc., Minchinhampton.—On Monday, Dec. 13th, I was summoned to see Elizabeth C——, aged thirty-nine, in labor with her ninth child. She was a short, strong-built, muscular woman, and had been in labor many hours. About two months previously two of her children were run over by a wagon, and one of them sustained a fracture of the thigh. She says she thought she should have been confined at that time, as the fright brought on severe

labor-pains, attended with a considerable discharge of water. She thinks the shock to her system, in consequence of the accident, caused the situation, or rather the position, of the fœtus to be changed; be that, however, as it may, certain it is, that on my making an examination I discovered the hand presenting. This I returned, and, after some difficulty, I succeeded in bringing down one of the feet, and in due time delivered her of a very large child. As the placenta was not readily thrown off, and as the womb was well contracted, I thought under the circumstances, it would be better to use no force; I therefore left her under the care of the midwife who was in attendance, and desired her, in the event of any symptom occurring requiring my attendance, to dispatch a messenger to me. Hearing nothing of the case after a lapse of several hours, I considered all was going on well, and I proceeded to visit a patient eleven miles off, who was very desirous of seeing me. On my return home in the afternoon, I found several urgent messages had been fotwarded to my house, and in consequence I lost no time in visiting the woman. I was much alarmed at the condition in which I found her. Her countenance was anxious and pallid, her lips bloodless, and not a vestige of pulse to be felt at either wrist; the voice was low, she complained of a load upon her chest, and there was a constant disposition to syncope. In consequence of my absence from home, Mr. Wells kindly supplied my place, and removed the placenta, which was firmly adherent. She had lost a good deal of blood, but this had ceased on my arrival. Mr. Wells had given her brandy, and applied hot bottles to her feet; he said, however, that he could detect no pulse at the time of his visit, neither could I an hour or two later, notwithstanding she had had a good deal of brandy-and-water. It was clear we had to contend with a very desperate case—that life was fast ebbing; and there seemed to be nothing left to be done but the operation of transfusion. Doubtful as the remedy was, Mr. Wells agreed with me in the propriety of trying it. I therefore had up the husband, and explained to him that his wife was sinking from loss of blood, and that the only chance remaing for her was supplying this loss by throwing some blood into her system, and that for this purpose it was requisite that I should

abstract some blood from him. To this he consented. Having made an opening into the vein of the right arm of the woman, I took a brass syringe capable of holding about three ounces. This I warmed by means of hot water; I then opened a vein in the arm of the man and received the blood into the syringe. I inserted the ivory point of the syringe; but, perhaps from the opening in the vein being too small, the stream got under the cellular tissue. I therefore cut down upon a vein in the other arm, and, with a syringe full of fresh blood, I directed the stream upwards. This appeared to do very well, and in about a quarter of an hour afterwards Mr. Wells thought he could discover a very faint pulsation. Still her condition was anything but promising; and, indeed, at one time during the operation, both Mr. Wells and myself thought she was gone. When her husband came to her, she said she never had such feelings before, and she was certain she was dying. However, I persevered in giving her hot egg-tea, with brandy, and occasionally port wine, (as she liked the latter the best of the two,) and incessantly applied the smelling bottle to her nostrils, also taking care to keep the feet warm by means of hot water. I also gave her a cordial mixture, containing chloric ether, and which certainly was very useful. She got through the night better than could have been expected, and the next morning she was decidedly better; she spoke more audibly, and there was some strength in the beat of the carotids; the pulse admitted of numbering, but was very weak indeed; and, although much exhausted, that disposition to syncope had entirely disappeared, and the tympanitic state of the bowles, which was so observable yesterday, to-day was much diminished. She passed no urine for thirty-four hours after her delivery, which made me anxious; this secretion, however, was restored, and for four days nothing could be more satisfactory than her progress. On the fifth day, her appetite was good, she felt stronger, and in all respects appeared to be going on well, with the exception of a hard boil on the back of the left forearm. This had been coming for a fortnight previous to her confinement, but had only become troublesome to-day. Each day this became harder and more extensive and inflamed, till at length the limb became so large and painful, from the tip of the fingers to the

shoulder-joint, that she could obtain no rest; she became feverish, lost her appetite, her breath got short, and on the 23d of December, ten days from her confinement, she died I should state that I cut deep and completely through the carbuncle, and with decided relief; the pain, after this incision, was much subdued, or, to use her own expression, I had "cut away the pain." There was scarcely any blood followed, and the sensation was that of cutting through brawn.

I should have been glad had the woman lived; nevertheless, she survived sufficiently long for the operation to be pronounced thoroughly successful; her death arose quite from extraneous causes.—*Ibid.*

Pathology of Insanity.—The following are the conclusions at which Dr. Forbes Winslow has arrived in relation to this vexed subject:

"I believe insanity (I am now referring to persistent insanity, not those transient and evanescent forms of disturbed mind occasionally witnessed) to be the result of a *specific morbid action of the hemispherical ganglia ranging from irritation, passive and active congestion, up to positive unmistakable inflammatory action.* This state of the brain may be confined to one or two of the six layers composing the hemispherical ganglia; but all the layers are generally more or less implicated, in conjunction with the tubular fibres passing from the hemispheres through the vesicular neurine. This specific inflammation, from its incipient to the more advanced stage, is often associated with great vital and nervous depression. It is, like analogous inflammations of other structures, not often accompanied by much constitutional or febrile disturbance, unless it loses its specific features, and approximates in its character to the inflammation of active cerebritis or meningitis. This state of the hemispherical ganglia is frequently conjoined with active sanguineous circulation and congestion, both of the substance of the brain and its investing membranes. The morbid cerebral pathological phenomena—viz: the opacity of the arachnoid, the thickening of the dura mater, its adhesions to the cranium, the depositions so often observed upon the convoluted surface of the hemispheres,

and on the meninges, the hypertrophy, scirrhus, the cancerous affections, the induration, the depositions of bony matter in the cerebral vessels and on the dura mater, the serous fluids in, and the ulcerations upon the surface of the ventricles, the alterations in the size, consistence, color, and chemical composition of the vesicular neurine and fibrous portion of the brain—are all, in my opinion, the results, the sequelæ, more or less, of that specific inflammatory condition of the hemispherical ganglia to which I have referred. It does not necessarily follow that the *fons et origo mali* of insanity is invariably to be traced to the brain. The preliminary morbid action and irritation are often situated in the heart, the stomach, the liver, the bowels, the lungs, or the kidneys, the brain being secondarily affected; nevertheless, in all cases inducing actual insanity, the hemispherical ganglia are involved in the morbid action."—*Ibid.*

Hints for the Treatment of Hydrophobia. By Dr. Marshall Hall.—Many years ago I had the opportunity of watching the course of a case of hydrophobia. It occurred in a little boy; and I scarcely left the room during the eight and forty hours that he survived. But I need not detail the series of symptoms which occurred, and which I have described elsewhere, on the present occasion.

It has appeared to me that there are *three* modes of death in this disease:—1st. Sudden death from asphyxia. 2d. Sudden death from secondary asphyxia. 3d. Sudden death (for in all the cases I think the death is sudden and unexpected at the precise moment at which it occurs) from nervous exhaustion.

Either of these modes of dissolution would be averted by the timely institution of tracheotomy. Indeed, if this measure were adopted, the frightful seizures which occur from trying to take liquids would be obviated. These seizures consist in fearful attacks of laryngismus, and of convulsions of the neck and pharynx, but chiefly of laryngismus, with threatening of instant suffocation. These seizures would be disarmed of their force and terror by tracheotomy.

Tracheotomy thus obviating the *effects of laryngismus*—1st. The sudden death from asphyxia, the immediate result of asphyxia, could not occur!

There remains the sudden death from exhaustion. It is a question whether this would occur necessarily from the poison of hydrophobia. Why should it occur *necessarily* from this poison? No reason can be given for this: and we are not to be misled into a conclusion unsupported by facts, since, though all cases of hydrophobia have proved fatal, they have proved fatal by a mode by which they would not occur if tracheotomy were performed.

Could any measures be adopted to check the violence of the spasm,—laryngismus and its effects being obviated,—such as the hydrocyanic acid, and so to prevent the subsequent exhaustion? Or could any remedies be adopted to remove this exhaustion more directly, as wine or cinchona?

These hints I throw out for the consideration of my professional brethren, in the hope of good.—*Ibid.*

Fomentations of Digitalis in certain kinds of Ascites.—Dr. Raymond Falot has published in the *Revue Thérapeutique du Midi* three cases of inflammatory ascites in which diuretics were not well borne by the stomach, and where fomentations with a decoction of digitalis leaves produced marked action of the kidneys, and absorption of the fluid effused in the peritonæum.

The first case is that of a girl twenty-four years of age, who, after severe wetting, was attacked with subacute peritonitis and consequent ascites. Nitre and powdered digitalis had very little effect, and tapping to twelve quarts took place. As the liquid re-accumulated, fomentations were made with a decoction of two ounces of digitalis to a quart of water boiled down to a pint. The liquid was applied by means of compresses soaked in it, and covered with oil skin to prevent evaporation. The kidneys acted very powerfully, and the effused fluid became completely absorbed. The same means also succeeded two years afterwards, when the patient suffered again from ascites.

The second case refers to a boy eight years of age, who had ascites after intermittent fever. Both the syrup and powder of digitalis were ill borne; the fomentations were used as above described, and the effusion disappeared whilst the kidneys and skin were acting powerfully.

Third case.—A man fifty years of age suffered from ascites after a very severe attack of gastric fever. No sort of medicine could be borne; the digitalis fomentations were resorted to, and the same favorable results as in the previous cases were obtained in a few months. Dr. Falot states that he does not wish to give his mode of treatment more importance than it deserves, but that he was much struck with the coincidence between the use of the fomentations and the increase of the renal and the cutaneous secretions. In one of the cases frictions with the tincture of digitalis had been used without success. The fomentations will certainly be worth a trial when the usual diuretics cannot be given by the mouth. The leaves should not be more than one year old.—*Ibid.*

Singular Case of Hydrophobia.—Last Christmas Anne Turner, aged seven, and residing at Birkenhead, was bitten by a dog, which was subsequently killed. No bad symptoms betrayed themselves until lately, when upon her mother coughing, the child screamed and became ill. Medical gentlemen were instantly called in, who, suspecting the character of the disease, blew upon the body at the distance of six feet which caused her to renew her screams; yet she had no delirium, nor objections to liquids, and her memory was good. A few days before her death her motions were dark and fœtid, her manner foolish, and sometimes she became rather furious, threatening to injure and bite her parents. At length death released her from her sufferings.—*ibid.*

THE WESTERN JOURNAL

THIRD SERIES.—VOL. XII.—NO. I.

LOUISVILLE, JULY, 1853.

HEALTH OF LOUISVILLE—THE WEATHER.

Every physician recognises the connection between health and the weather. We expect certain diseases in a particular condition of the atmosphere, and when the condition changes we look for complaints of a different character. Extremes of temperature are esteemed unfavorable to health. Old and infirm persons are said to be more likely to die in mid-winter or mid-summer. A variable climate, where the range of the thermometer is great, is supposed to be peculiarly trying to the human constitution. Meteorology, from this intimate dependence of health upon the weather, has always been a favorite study with physicians.

We noted in our last number an extraordinary drought and elevation of temperature for our latitude and the month of June. On the 18th of May, Louisville was visited by a severe thunder shower, in which a negro man and his team were killed by lightning on Walnut street. From that time until the 3d of July, or more than six weeks, the rain that fell did not amount to three-fourths of an inch—it was only sufficient to lay the dust, two or three times, in the streets. The heat was at the same time excessive. From a meteorological table, kept by our friend, Lawrence Young, Esq., nine miles from the city, we observe that the mean temperature of the month of June, at his farm, was 75.18, and that the

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mercury in Fahrenheit's thermometer ranged for many days from 90° to 97°. The minimum at two o'clock any day during the month was 75°. In the city the heat was still more excessive. For the first time, we believe, in the memory of the oldest inhabitant, the thermometer indicated a temperature above blood heat—within one degree of a hundred. During several successive days it rose, in a fair exposure, above 95°.

It is interesting to remark, that during this month of tropical fervor the health of the city was most excellent, and that while men pursued every branch of labor under this torrid sun with their accustomed activity, no accidents from heat—no *coups de soleil*—were reported. Bowel affections were uncommonly rare. We saw a few cases of cholera infantum, and heard of a few more in the practice of our friends, but the complaint assumed nothing of an epidemic form. Dysentery, cholera morbus, fevers, intermittent or remittent, had no existence. There have been some cases of measles and some of erysipelas, and here and there a case of typhoid fever has occurred. Of those who have suffered with this fever—always a rare complaint in Louisville—we have to record the melancholy case of a promising student of medicine, Mr. Angelo W. North, who fell a victim to the disease on the 2nd of this month.

PROFESSOR FLINT.

On receiving from Professor Flint his letter of resignation, the Council of the University of Buffalo passed the following complimentary resolutions:

"1. *Resolved*, That the Council accept, with sincere sorrow, the resignation of Dr. Flint of the important Chair so long and ably filled by him.

2. *Resolved*, That in his whole connection with the University, Dr. Flint has labored with untiring zeal for its interests, and with distinguished success in their attainment. That connection dates from the earliest inception of the school; and in all the vicissitudes which have attended its existence, Prof. Flint has ever been foremost in sustaining in this city the cause of sound medical education. And the Council, while they attribute to the talents of Dr. Flint no small share in the success of the institution, are rejoiced to know that, in thus building up and sustaining it, he has found his reward in a wide spread reputation as one of the ablest teachers of practical medicine in our country.

3. *Resolved*, That in severing the relations that have united us so long, we tender to Dr. Flint our hearty thanks for his valuable services, and

our earnest wishes that in the University of Louisville, to which he has now been called, he may find a pleasant and ever enlarging field of professional labor."

CHANGES IN MEDICAL SCHOOLS.

The vacancy in the University of Buffalo, caused by the resignation of Professor Flint, has been filled by the election of Thomas F. Rochester, M. D., of the city of New York, to the chair of the Principles and Practice of Medicine and of Clinical Medicine. Dr. Rochester is represented to be a young man of talents, learning and industry, "an easy and spirited lecturer, and eminently a gentleman in his feelings and manners." We congratulate our friends at Buffalo on their success in procuring the services of so worthy an incumbent of that important chair.

In the Kentucky School of Medicine and Surgery Dr. Foree has resigned the chair of Materia Medica, and is succeeded by Robert J. Breckinridge, M. D., of this city. Dr. Breckinridge is known to many of our readers as a lecturer and writer. He is a young man of the finest talents, and is destined, we have no doubt, to take a high rank in his profession as a teacher and practitioner.

We learn that Professors Cobb and Baxley have resigned their chairs in the Medical College of Ohio, but have not heard who succeed them.

DR. D. W. YANDELL'S OPERATIONS FOR STONE IN THE BLADDER.

Dr. D. W. Yandell has obligingly furnished us with the following brief notes of his operations for stone in the bladder:

"*Case* 1.—William Allen, of Carroll county, Tennessee, æt. 20; the subject of urinary calculus since his third year. Operated May, 1850, in presence of Drs. Wright and Bell, and several other professional gentlemen, of Huntingdon. The calculus was of a flattened, oval shape, soft, exceedingly friable, and adherent, by its edges and one side, to the *bas fond* of the bladder. It weighed between three and four ounces, and measured four inches in circumference Recovery slow, but steady and complete. There has been no return of the disease.

Case 2.—A little son of Mr. B., in the same county, three years and a half old, had suffered with symptoms of stone since soon after his birth.

Assisted by the same gentlemen, and by Dr. Wilson W. Yandell, of Gibson county, I operated upon him a few days after performing my first operation, and removed a stone of the size of a pigeon's egg. The wound healed by the first intention; in twenty-four hours the urine passed by the urethra. The calculus was soft and friable, as in the first case.

Case 3.—The youngest son of Hon. William Fitzgerald, near Paris, Tenn., between three and four years of age, had been troubled with symptoms of vesical calculus since his early infancy. In June, 1850, with the assistance of Drs. Taliaferro and Warren, of Paris, and Dr. Wright, of Huntingdon, I extracted from the bladder of the little patient two smooth, white, soft calculi, each about the size of a partridge's egg. The recovery was rapid, and his general health has become perfect. In neither of these cases have there been any indications of the formation of other calculi.

Case 4.—The subject of the following observation is the son of Robert Douglass, Esq., of Sumner county, Tennessee. When the operation was performed, in December, 1850, the little boy was in his fourth year, and robust, though not large of his age. My friend Dr. Elmore Douglass, of Gallatin, a relative of the patient, and Drs. Duval and Foster were present at the operation, and afforded me the requisite assistance. The stone was small, rough, and very soft. The patient had a good recovery, and has enjoyed uninterrupted health up to the present time.

Case 5.—The subject in this case was a little boy, the son of Mr. Shaffner, of Carroll county, Tenn. The operation was performed with ease, and for two days everything promised well. Forty eight hours after it was done the wound had almost closed, and the urine had begun to be voided by the natural passage. Soon after this, the patient was seized with a chill, which persisted for thirty six hours. On rallying from the chill—which, for some time, I was almost certain he would never d.—the reaction was excessive, and the end of all was phlebitis, commencing at the wound and extending to the tip of the great toe of the left foot. The veins in both groins were the seat of intense inflammation. It was not until the tenth day that I despaired of his recovery. The constitution of the little patient was enfeebled and poor, and to this, I suppose, may be ascribed the occurrence of the phlebitis.

In each of these operations chloroform was used, and the patients rendered unconscious of the pain. The instrument employed was the bistoury, and the method pursued that of Mr. Liston."

June 24th, 1853.

DEATH OF DR. CHAPMAN.

The great men of our generation—the physicians, statesmen, and warriors who have shaped the age in which we live, are rapidly passing away. Wellington, Clay, Calhoun, Webster, Drake, Orfila, Pereira, Graves, are names that now belong to history. It is but a little while since we announced the death of Dr. Horner, for a long time one of the noted medical men of our country; and now we have to record the death of Dr. Chapman, who, for many years, stood confessedly at the head of the American medical profession. The death of this distinguished individual took place in Philadelphia, on the 2nd of this month.

Dr. Chapman enjoyed a reputation such as few men have the good fortune ever to gain. He was eminent as a writer, practitioner and teacher. Called early in life to a chair in the most renowned medical school of his country, he soon became one of its chief ornaments. Without the learning or the industry of many of his cotemporaries, by the charm of his eloquence and the fascination of his manners, he won his way to the very front rank of his profession. Chapman is a name associated with wit, humor, conviviality—with eloquence, kindly social impulses, and noble generosity.

Dr. Chapman, with two or three exceptions, had been longer before the public than any medical man in our country who survives him. Dr. Coxe and Dr. Caldwell are the only two, we believe, who entered public life in advance of him and are still living. He attained to a good old age, and was fortunate, not only in the length, but in the circumstances of his life. As a physician he was much confided in; patients visited him from every part of the Union. As a teacher he was admired, applauded and revered; and the evening of his life was solaced by the kindness of "troops of friends." For several years before his decease he had lived in retirement, having resigned his chair in the University when he began o feel the infirmities of age. We saw him in Baltimore at the second meeting of the American Medical Association, of which he was then President, and listened with pleasure to his address on the occasion. No one could fail to be struck with his exceedingly imposing manner. He was then in excellent health, and evinced as keen a relish for society, and as lively a concern for the honor of his profession as ever he had done.

The intelligence of Dr. Chapman's death reached us just as the Journal was going to press, and we have not leisure or space for a more extended obituary notice in our present number. A sketch of his life and services will be given at some future day.

CHLOROFORM AND THE QUEEN.

We stated in our last number upon what we deemed good authority, that, in her late accouchement, Queen Victoria was placed under the influence of chloroform. The London Lancet for May, referring to the report, which is given in the Association Medical Journal, has the following paragraph on the subject:

"On inquiry we were not at all surprised to learn that in her late confinement the Queen was not rendered insensible by chloroform, or by any other anæsthetic agent. Probably some officious meddlers about the court so far overruled her Majesty's responsible professional advisers as to lead to the pretence of administering chloroform."

The question is one of slight importance, but the denial of the Lancet does not appear to us to amount to anything. It supposes there might have been a "pretence of administering" the anæsthetic. We cannot help thinking it singular if the Queen and her "responsible professional advisers" were agreed to enact such a farce on an occasion of the kind.

We believe the first accident from the administration of chloroform in midwifery has yet to be recorded. The fatal cases in dentistry and surgery are, unhappily, but too numerous and too well attested. Why, in all the multiplied instances of its administration to parturient females, in natural as well as in difficult labor, not one casualty has occurred, while so many patients have died in the dentist's chair or on the surgeon's table, may be impossible to explain, but it is certainly a curious and interesting fact. It would seem to denote that it is in the practice of the obstetrician especially, that chloroform has its appropriate place and possesses its highest value. The pain of a woman in travail, we suspect, is as acute as any inflicted by the surgeon's knife, and if anæsthesia may be purchased on terms which seem so safe, we confess we are in favor of giving her the benefit of it, even in cases of natural labor. If our professional experience should change, and deaths begin to occur in midwifery as they have done in surgery, then we should certainly hesitate; but let us hope that we are not destined to meet with any such reverse.

THE NORWALK CATASTROPHE.

At a meeting of the delegates to the late Medical Association still remaining in New York, May 12th, the following preamble and resolutions, read by Dr. J. H. Griscom, were adopted:

"*Whereas,* amid the wide-spread affliction caused by the recent catas

trophe at Norwalk, the members of the American Medical Association, recognizing in this mournful event the hand of an all wise Providence, feel called upon to express their grief at the sudden removal from life of Abel L. Pierson, M. D., of Salem, Mass.; Alexander Welch, M. D., of Hartford, Conn.; Josiah Bartlett, M. D., of Stratham, N. H.; Samuel Beach, M. D., of Bridgeport, Conn.; James M. Smith, M. D., and J. H. Gray, M. D., of Springfield, Mass., late members of the Association: And, *whereas*, it is the earnest desire of the members, still present in the City of New York, to record a suitable expression of their feelings upon an occasion equally unprecedented and distressing; therefore,

Resolved, That the members have received with profound sorrow the lamentable intelligence of the loss which the community, as well as the profession, have sustained, by the death of so large a number of the American Medical Association.

Resolved, That as a suitable, though inadequate, external mark of their grief at the sudden demise of friends from whom they had so recently parted, the members of the Association in general are recommended to wear the usual badge of mourning for the space of thirty days.

Resolved, That a Committee of five be appointed to devise some suitable method of commemorating the event, and the worth and professional character of our lamented associates, and recommend their plan at the next meeting of the Association.

Resolved, That the members of the Association deeply sympathise with the relatives of the deceased, and that a copy of these resolutions duly authenticated, be transmitted to their respective families."

Drs. Joseph M. Smith, F. C. Stewart, J. W. G. Clements, W. Rockwell, Isaac E. Taylor, E. L. Beadle and John Watson were appointed a committee to consider the best method of providing some memorial in commemoration of the members who perished by the terrible disaster. This committee will report at the meeting of the Association in St. Louis next May.

METEOROLOGICAL TABLE,

For the Month of June, 1853.

BY LAWRENCE YOUNG, ESQ., NEAR LOUISVILLE, KY.

Day of month.	Morning.	2 o'clock, P. M.	Evening.	Mean Temperature.	Barometer.	Rain-gauge.	Course of Wind.	Remarks.
1	70	89	77	72	29.47		S. W.	Clear.
2	67	83	78	76	29.54		S. S. W.	Cloudy.
3	69	86	74	77	29.57		W. S. W.	Variable.
4	65	90	78	78	39.62		S. W.	Do.
5	64	82	78	70	29.58		W.	Clear.
6	69	86	74	77	29.51		S. S. W.	Variable.
7	60	77	66	68	29.49	18	N. N. W.	Do.
8	44	78	67	65	29.67		S. E.	Clear.
9	50	87	73	70	29.53		W.	Variable.
10	57	90	77	75	29.56		W. S. W.	Clear.
11	60	91	77	76	29.60		E. N. E.	Do.
12	61	91	80	77	29.68		E.	Variable.
13	63	93	76	77	29.71		W. S. W.	Clear.
14	62	93	73	76	29.70	56	W.	Variable.
15	63	81	75	73	29.60		N.	Cloudy.
16	64	91	78	78	29 45		W.	Variable.
17	63	86	74	74	29.48		W. S. W.	Clear.
18	55	86	74	72	29.52		W.	Do.
19	55	92	78	75	29.51		S. S. W.	Do.
20	61	96	81	79	29.54		S. S. W.	Variable.
21	71	93	78	80	29.50		S.	Do.
22	71	91	82	81	29.51		S. S. W.	Do.
23	76	75	68	73	29.37		W. S. W.	Do.
24	60	76	68	68	29.70		W. S. W.	Do.
25	56	77	69	67	29.67		N.	Do.
26	60	88	78	75	29.65		E.	Do.
27	68	91	78	79	29.53		W. S. W.	Do.
28	61	96	8	80	29.56		W. S. W.	Do.
29	68	97	84	83	29.51		W. N. W.	Do.
30	66	94	83	81	29.55		N. W.	Do.
				754		74		